East Engin. Library

APR 4 1940

Pre-Convention Issue

American Foundryman

A PUBLICATION PRESENTING ASSOCIATION AND CHAPTER ACTIVITIES

National Foundry Week

Chicago

May

4
6
7
8
9
10

Typical Operating Exhibit at Foundry Show

Open Letter to Foundrymen from President Washburn, See Page 2—Highlights of Convention, See Page 3—Program Details, See Page 5—Exhibitors at Foundry Show, See Page 12.

April 1940

The American Foundrymen's Association is especially pleased to acknowledge and reprint an editorial which appeared in the February 1 issue of the Foundry Trade Journal, the foundry technical publication of the British industry and official organ of the Institute of British Foundrymen. This editorial tribute to the A. F. A. is a gratifying recognition of the work of the many members and chapter officers who have contributed so freely of their knowledge and time to the upbuilding of the industry. Our present members are indebted to earlier leaders of the British and American and overseas Associations in promoting exchange of ideas by forming the International Committee of Foundry Technical Associations which sponsors international foundry congresses.

Foundry Technology In America

(From Foundry Trade Journal, London)

THERE is insufficient recognition in Europe of the debt owing to the American Foundrymen's Association for the leadership it has invariably given since its formation more than forty years ago in the technical advancement of foundry practice. Its successful launching by Mr. John A. Penton and the late Dr. Moldenke was quickly recognized by the more progressive foundrymen of the United Kingdom, and the formation in 1904 of the Institute of British Foundrymen (originally the British Foundrymen's Association) was a direct result therefrom. Although the United States are as old, industrially, as any other country, it has generally been the case that they have modelled their professional organizations along the lines of the earlier British ones, but so far as foundry practice is concerned, it must be conceded that they were the pioneers. Not only in the creation of technical organizations were they the first in the field but also in most of the activities now generally associated with foundry technical institutions, except perhaps for the creation of Branches and a pure research body such as the United Kingdom possesses in the British Cast Iron Research Association.

Perhaps, because of the great distances between the foundry centers in the American continent, it was originally found necessary to supplement the benefits derived from the annual conferences by the formation of numerous committees and subcommittees. To such an extent has this acitivity grown that the last list to arrive here contains no fewer than 131 entries, including those relating to the official A.F.A. representatives on the committees of other bodies. To staff these committees 282 members hold office. As the executive staff of the A.F.A. consists of only five people, the organization is a fine testimonial to voluntary effort. A few years ago, the Association undoubtedly felt the need for local activities in order to benefit those who found themselves unable to attend the annual congresses except on rare occasions. With thoroughness and commendable energy, the officers initiated a continent-wide campaign. In some cities local associations existed and these had to be converted into Branches or "Chapters" as they are known in America, whilst elsewhere new ground had to be broken. The result is that now there are no fewer than eighteen Chapters.

For social gatherings, it is not uncommon to read that 500 persons were present, and at a Christmas party held in Cleveland the muster exceeded 750—a larger number than any foundry gathering—even international—ever held in this country! As the membership of the Association is of the order of 3,000, the support of its members must be exceptionally enthusiastic.

The work sponsored by the Association is a model of what can be done by a technical institution as distinct from a research association. It has consistently made efforts to bring before its members any fresh developments by means of exhibitions and technical sessions. The assembly in report form of data on particular subjects such as sand testing, costing, the properties of cast metals, and the like, has been particularly effective in creating utilisable yardsticks within the industry, on the one hand, and popularizing its products with potential customers on the other. Perhaps the latter activity ought to be undertaken, or at least paid for, by the employers' federation. Yet, if benefit accrues to the industry, it is immaterial in the long run who foots the bill. That benefit has resulted to the American foundry industry from the publication of the Cast Metals Handboook is undeniable and a similar effect is confidently expected from the newer one, "Alloy Cast Irons." Pure research work, such as that dealing with the behavior of foundry sands at high temperatures, is being sponsored by the Association at Cornell University. The early results are of exceptional interest, but whatever the outcome, American methods are such that the findings will finally be reduced to such simple terms that the practical man will be in a position to apply them with advantage to his own practice.

In international cooperation, despite relative remoteness, the A.F.A. has been most enthusiastic, and we are well aware that there are many American foundrymen who owe the Nazis a grudge for having spoilt their plans for participating in last year's International Congress. Since the inception of the scheme for the international exchange of technical papers, we estimate the American contributions must now number close upon one hundred, constituting in themselves a valuable compendium of foundry technology.

The personnel of the United Kingdom foundry industry is both cognizant and appreciative of the very substantial help which has been given to it by the Institute of British Foundrymen, and it is desirable that it should be made aware of just what it owes to the influence, example and assistance emanating from the American Foundrymen's Association.

A. F. A.
Officers and Staff

President
H. S. WASHBURN*
Plainville Casting Co., Plainville, Conn.

Vice President
L. N. SHANNON*
Stockham Pipe Fittings Co., Birmingham, Ala.

Executive Vice President and Manager of Exhibits
C. E. HOYT*†

Secretary
R. E. KENNEDY†

Treasurer and Director of Safety and Hygiene Section
E. O. JONES†

Technical Secretary
N. F. HINDLE†

Assistant Secretary-Treasurer
J. REININGA†

✦

Board of Directors

Term Expires 1940

D. P. FORBES*
Gunite Foundries Corp., Rockford, Ill.

H. B. HANLEY
American Laundry Machinery Co., Rochester, N. Y.

C. J. P. HOEHN
Enterprise Foundry Co., San Francisco, Calif.

THOMAS KAVENY*
Herman Pneumatic Machine Co., Pittsburgh, Pa.

J. L. WICK, JR.
Falcon Bronze Co., Youngstown, Ohio

Term Expires 1941

H. BORNSTEIN*
Deere & Co., Moline, Ill.

W. H. DOERFNER
Saginaw Malleable Division General Motors Corp., Saginaw, Mich.

H. S. HERSEY
The C. O. Bartlett & Snow Co., Cleveland, Ohio

G. A. SEYLER
The Lunkenheimer Co., Cincinnati, Ohio

A. WALCHER*
American Steel Foundries, Chicago, Ill.

Term Expires 1942

W. B. COLEMAN
W. B. Coleman & Co., Philadelphia, Pa.

C. R. CULLING
Carondelet Foundry Co., St. Louis, Mo.

O. A. PFAFF
American Foundry Equipment Co., Mishawaka, Ind.

MARSHALL POST
Birdsboro Steel Foundry & Machine Co., Birdsboro, Pennsylvania

F. J. WALLS
International Nickel Co., Inc., Detroit, Mich.

✦

†Headquarters
Room 1398, 222 West Adams St., Chicago, Ill.

*Members, Executive Committee.

American Foundryman

CONTENTS

April, 1940

Volume 2 **Number 4**

	Page
Foundry Technology In America *Editorial by Foundry Trade Journal*	Inside Front Cover
Open Letter to Foundrymen of America from President Washburn	2
Highlights of Convention	3
Schedule of Sessions	5
Medal Awards	9
Board of Awards Address by C. E. Wilson, General Motors Corp.	11
List of Exhibitors for Foundry Show	12
Exhibit Hall Layout	15
Chicago Chapter Convention Committees	16
Ladies' Entertainment	18
Regional Meetings	20
Michigan State Conference	20
Birmingham Conference	21
Wisconsin Conference	22
West Coast Meetings	23
Chapter Directory	24
Chapter Activities	26
New Members	31
Abstracts	32
Chapter Meetings for April	33

Published by the American Foundrymen's Association, Inc., 222 West Adams St., Chicago, Ill., for the purpose of presenting Association and Chapter activities. Published monthly. Subscription price $1.00 per year. Single copies, 10c.

Entered as second class matter July 22, 1938, at the post office at Chicago, Illinois, under the Act of March 3, 1879.

AMERICAN FOUNDRYMEN'S ASSOCIATION, INC.

EXECUTIVE OFFICES • 222 W. ADAMS STREET CHICAGO

March 11, 1940

To the Foundrymen of America -

May 4, 6, 7, 8, 9 and 10 are important days for those of us who make our livelihood in the foundry industry.

We are living in an era of change -- New Methods, New Equipment, New Materials. To live and grow we must change with the times. For over forty years the American Foundrymen's Association has been the clearing house and the forum which has enabled our industry as a whole, to keep abreast of developments and which has fostered the use of cast metals.

The Annual Meetings of our Association bring to us, through the presentation of papers and through discussion, the practical answers to many of our problems of today. They present to us new methods still in the formative stage which become the accepted standard practice of the future. During the past two years we have been presented with ideas which some of us felt were the creation of an impractical dreamer, yet today these ideas have become accomplished engineering facts.

This year, in addition to our technical meetings, the Annual Convention will include the Foundry Show and, due to the splendid cooperation being received from the suppliers of foundry equipment and materials, we believe it will be one of the largest ever held. You will have the opportunity to inspect in operation the most advanced technical equipment and to discuss with others the latest developments in supplies for the manufacture of cast metal products. As there will not be another exhibit of foundry equipment until 1942, the suppliers are taking every advantage of the present opportunity, and we, in turn, should not miss our opportunity.

I urge you to attend the 44th Annual Convention and Exhibit in Chicago.

H. S. Washburn

Henry S. Washburn, President
American Foundrymen's Association

Chicago Lake Front Skyline

Highlights of 1940 National Foundry Week

THE 44th Annual Convention and Foundry and Allied Industries Show of the American Foundrymen's Association gives every indication of providing the most comprehensive National Foundrymen's Week ever staged. The Foundry Show, opening with a preview on Saturday, May 4, will include some 250 individual exhibits, many of these operating and all displaying new developments of foundry equipment and supplies of many types. The exhibits will be housed in the extensive and well equipped International Amphitheatre, Chicgao.

Following the Preview Day, the show will be open from Monday, May 6, through late afternoon, Friday, May 10. This foundry show, the first

Henry S. Washburn, Plainville Casting Co., Plainville, Conn., President, American Foundrymen's Association

since 1938 in Cleveland, will attract many thousands of foundrymen from all over the United States and Canada. Headquarters for the registration for the convention will be at the International Amphitheatre. Technical sessions during exhibit hours will convene in meeting rooms at the Stock Yard Inn and the Saddle and Sirloin Club adjacent to the amphitheatre and other sessions will be at the Palmer House in the downtown Chicago district, where the ladies' headquarters will also be located.

The program for the annual convention will present a well balanced series of technical, management and shop operation sessions as will be noted from the attached schedule.

Technical Sessions

Beginning Monday, May 6, some 21 technical sessions have been scheduled by the program committee, these covering general interest subjects such as foundry refractories, plant equipment, sand research, apprentice training, foreman training, safety and health programs, job evaluation and time study and patternmaking. In addition, each of the major divisions, namely, gray iron, steel, malleable and non-ferrous, are scheduling several sessions each for the presentation of papers covering research and practices in the production of various types of castings. A study of the program will reveal that many of the foremost authorities in casting practices are presenting papers on pertinent problems of the industry.

Shop Courses

Two shop courses, each consisting of four sessions, have been arranged. One will deal with foundry sand control, the other with cupola melting. Discussion leaders will explain some of the most practical shop problems, with those attending being given an opportunity to present their special problems for solution. These shop courses, initiated in 1928, have continued to be one of the most popular features of the convention.

Presentation of Medals and Board of Awards Address

A feature attraction of the convention will be the Annual Business Meeting, Wednesday, May 8. The Annual Board of Awards address will be given by Charles E. Wilson, executive vice president, General Motors Corp., Detroit, Mich.

Crystallization Demonstration

The Association is especially fortunate in having Dr. C. W. Mason, Cornell University, Ithaca, N. Y., consent to present during the convention demonstrations on "Growth of Crystals, Illustrated by Microprojection." The demonstration will show materials changing from the melted to the solid state. Although the experiments are simple and the theory is probably generally known, they give a vivid and concrete picture of what takes place and thus serve to illuminate ideas of the behavior of metals.

The formation of dendrites, segregation of impurities and other phenomena typical of the casting of metals are seen in action by projection of microscopical non-metallic examples. Allotropic

transformations, eutectics and other cases of phase studies are similarly demonstrated.

Those who have seen this demonstration pronounce it one of the most interesting and enlightening educational demonstrations for those seeking information on cast metals. Dr. Mason, who is professor of chemical microscopy and metallography, Cornell University, will present the demonstration three times during the convention that as large a number as possible may see it.

Annual A.F.A. Dinner

The main dinner event of the week will be the annual dinner of the Association which is scheduled for the evening of Thursday, May 9. The president of the Association, Henry S. Washburn, Plainville Casting Co., Plainville, Conn., will preside. Following the brief formalities of the dinner and as an innovation to popularize this affair, the Chicago Chapter has planned a series of entertainment events and dance modeled along the lines of the justly famous Ladies' Night of the chapter which has proven so popular over the last few years.

Annual Non-Ferrous Division Social Dinner

As the social get-together dinner staged last year as an innovation by the Non-Ferrous Division proved such an enjoyable affair, the Division decided to make this an annual affair for the members and their ladies. This year the dinner will be held at the Palmer House the evening of Wednesday, May 8. A program of music has been arranged, with an address by W. S. Devereaux, special agent in charge, Federal Bureau of Investigation, Chicago. Division Chairman Harold J. Roast, Canadian Bronze Co., Montreal, will preside and a pleasant time is assured to those attending.

Buffet Smoker and Entertainment

In lieu of the usual evening stag dinner staged at recent conventions, this year a committee of the Chicago Chapter is reserving the hours from 5 to 7 P. M., Tuesday, May 7, for a popular buffet smoker and get-together, providing, in addition to refreshments, entertainment features which will make these hours an especially enjoyable occasion, bringing together those at the convention relaxing after a strenuous day of business activities. Some mystery is attached to the plans of the committee, but none will want to miss this smoker.

Engineering Instructors' Dinner

Another event and one long established is the annual dinner of engineering university instructors. Started as a means of promoting acquaintance among those in charge of foundry instruction at engineering schools, this dinner meeting has grown in popularity and is now under the sponsorship of the A.F.A. Committee on Cooperation with Engineering Schools. This year the theme of the discussion will center around methods for disseminating information on cast metals to engineering students. It is of interest to note that an outgrowth of these engineering dinners was the promotion and publication by the Association of the Cast Metals Handbook, first issued in 1935 with a second edition in 1939.

Plant Visitation

While inspection of the Foundry Show and attendance at the technical sessions are the two main attractions of the week, the plant visitation committee of the Chicago Chapter will provide opportunity for inspection of a large number of major industrial plants and foundries in the immediate Chicago area. A general group tour has been arranged for the afternoon of Monday, May 6, this group to inspect the blast furnace, coke plant and steel mills of the Wisconsin Steel Division of the International Harvester Co. On the return trip a stop will be made at the Museum of Science and Industry to inspect the operating foundry exhibit there. During the week individual trips can be made to the following plants which are opening their doors to visitors:

L. N. Shannon, Stockham Pipe Fittings Co., Birmingham, Ala., Vice-President, American Foundrymen's Association

Carnegie-Illinois Steel Corp., South Works.
Interlake Iron Corp.
Crane Co.
Link-Belt Co.
Continental Roll & Steel Foundry Co.
American Steel Foundries.
Allied Steel Casting Co.
Griffin Wheel Co.
Western Electric Co.
Whiting Corp.
Melrose Park Plant, National Malleable & Steel Castings Co.
Chicago Malleable Iron Co.
McCormick and Tractor Plants of International Harvester Co.
Liquid Carbonic Co.

Division Luncheons

Each of the divisions, Malleable, Steel, Non-Ferrous and Gray Iron, have scheduled luncheon meetings, at which time the members will get together for informal discussion of subjects and problems pertinent to their branches of the industry. Carl Thieme, H. Kramer & Co., Chicago; G. P. Phillips, International Harvester Co., Chicago; A. M. Fulton, Northern Malleable Iron Co., Minneapolis; and A. H. Jameson, Malleable Iron Fittings Co., Branford, Conn., will preside at these luncheons.

Schedule of Sessions and Events, 44th Annual Convention

Saturday, May 4

1:00 to 10:00 P. M.—Chicago District Day at Exhibition
(A preview planned especially for plant executives and shop men of Chicago area.)

Monday, May 6

9:00 A. M. to 5:30 P. M.—Foundry Show Open
A. M. and P. M.—Committee meetings and plant visits.

11:00 A. M.—Gray Iron Shop Course
(Session 1)
Cupola Operation
Chairman, P. T. Bancroft, Moline, Ill.
Discussion Leader, John Grennan, University of Michigan, Ann Arbor, Mich.

1:00 P. M.—Group Plant Inspection Tour
(To Plant of Wisconsin Steel Division of International Harvester Co., with return stop at Museum of Science and Industry to witness special showing of foundry exhibit).

7:00 P. M.—Engineering School and Plant Instructors' Annual Dinner
Presiding, F. G. Sefing, International Nickel Co., New York City.
Co-Chairman, C. H. Casberg, Dept. of Mech. Engrg., University of Illinois, Urbana, Ill.
Discussion Subject—Dissemination of Information on Cast Metals to Students

8:00 P. M.—Plant and Plant Equipment Session
Chairman, James Thomson, Continental Roll & Steel Foundry Co., E. Chicago, Ind.
Co-Chairmen, R. D. Brizzolara, American Steel Foundries, Chicago, and W. R. Jennings, John Deere Tractor Co., Waterloo, Ia.
Cooling and Storage of Foundry Sand, by H. L. McKinnon, C. O. Bartlett & Snow Co., Cleveland.
Foundry Equipment at Indianapolis Plant, International Harvester Co., by F. H. Amos, International Harvester Co., Chicago

Tuesday, May 7

9:00 A. M. to 5:30 P. M.—Foundry Show Open

9:00 A. M.—Sand Shop Course
(Session 1)
Non-Ferrous Shop Sand Control
Chairman, D. Frank O'Connor, Walworth Co., S. Boston, Mass.
Discussion Leader, Donald May, Crane Co., Chicago, Ill.

10:00 A. M.—Apprentice Training Session
Chairman, C. R. Culling, Carondelet Foundry Co., St. Louis, Mo.
Co-Chairman, C. J. Freund, Dean of Engrg., University of Detroit, Detroit, Mich.
An Adaptable Apprentice Program, by A. L. Armantrout, Carnegie-Illinois Steel Corp., South Works, Chicago, Ill.
A Graduate Apprentice's Review of His Training, by C. W. Wade, Caterpillar Tractor Co., Peoria, Illinois
Technique of Training Foundry Apprentices, by A. H. Wornom, Newport News Ship Building & Dry Dock Co., Newport News, Va.

10:00 A. M.—Malleable Cast Iron Session
Chairman, C. C. Lawson, Wagner Malleable Iron Co., Decatur, Ill.
Co-Chairman, D. P. Forbes, Gunite Foundries Corp., Rockford, Ill.
Composite Molding in a Malleable Foundry, by Sam Healy, Saginaw Malleable Iron Div., General Motors Corp., Saginaw, Mich.
An Unusual Structure in Malleable Iron, by Enrique Touceda, Malleable Founders' Society, Albany, N. Y.
A Sand Control Program in a Malleable Foundry, by D. F. Sawtelle, Malleable Iron Fittings Co., Branford, Conn.

10:00 A. M.—Non-Ferrous Session
Chairman, Wm. J. Laird, Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.
Co-Chairman, R. W. Parsons, Ohio Brass Co., Mansfield, O.
Procedure to Obtain Maximum Physical Properties in Melting a Given Alloy, by Wm. B. George, R. Lavin & Sons, Chicago, Ill.
Improvements in Gas Melting Furnaces in the Non-Ferrous Foundry, by E. W. Williams, Equitable Gas Co., Pittsburgh, Pa.

2:00 P. M.—Patternmaking Session
Chairman, Vaughan Reid, City Pattern Works, Detroit, Mich.
Pattern Coating Materials, by Frank Cech, Cleveland Trade School, Cleveland, O., and V. J. Sedlon, Master Pattern Co., Cleveland, O.
Pattern Color Markings, by G. V. Lustig, Barber-Colman Co., Rockford, Ill.

2:00 P. M.—Malleable Cast Iron Session
Chairman, R. J. Anderson, Belle City Malleable Iron Co., Racine, Wis.
Co-Chairman, D. I. Dobson, General Malleable Corp., Waukesha, Wis.
Effects of Manganese in Second Stage Graphitiza-

DISCUSSION LEADERS, CONVENTION SHOP COURSE SESSIONS

D. J. Reese

F. Brewster

F. L. Weaver

L. H. Hahn

J. Grennan

A. H. Dierker

(Tuesday, May 7, Continued)

tion, by D. P. Forbes, P. A. Paulson and G. K. Minert, Gunite Foundries Corp., Rockford, Ill.

Heat Treatment of Malleable Iron, by R. J. Cowan, Surface Combustion Corp., Toledo, O.

2:00 P. M.—Non-Ferrous Session

Chairman, Harold J. Roast, Canadian Bronze Co., Montreal, Que., Canada

Co-Chairman, Wm. Romanoff, H. Kramer & Co., Chicago, Ill.

Non-Ferrous Applications of Top Pouring Methods, by A. K. Higgins, Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Tentatively Recommended Practice on Sand Cast Bronze, Red Brasses and Semi-Red Brasses

Non-Ferrous Division Annual Business Meeting Reports of Officers and Committees

4:00 P. M.—Gray Iron Shop Course (Session 2)

Cupola Practice

Chairman, Horace Deane, American Brake Shoe & Foundry Co., Mahwah, N. J.

Discussion Leader, Donald J. Reese, International Nickel Co., New York City

5:00 to 7:00 P. M.—Smoker and Entertainment Program (Sponsored by Committee of the Chicago Chapter)

8:00 P. M.—Refractories Session

Chairman, A. H. Dierker, Ohio State University, Columbus, O.

Co-Chairman, J. A. Kayser, Laclede-Christy Clay Products Co., St. Louis, Mo.

Comparison of Refractories for Cupola Service, by J. A. Bowers and Jas. T. MacKenzie, American Cast Iron Pipe Co., Birmingham, Ala.

Linings for Desulphurizing Ladles, by John Lowe, Vilter Mfg. Co., Milwaukee, Wis.

8:00 P. M.—Demonstration of Crystallization of Cast Metals (First Showing)

Presiding, H. H. Judson, Goulds Pumps, Inc., Seneca Falls, N. Y.

Close-Ups of Crystal Behavior Illustrated by Microprojection — Demonstration by Dr. C. W. Mason, Cornell University, Ithaca, N. Y.

Wednesday, May 8

8:30 A. M.—Sand Shop Course (Session 2)

Gray Iron and Malleable Practice

Chairman, E. E. Woodliff, Harry W. Dietert Co., Detroit, Mich.

Discussion Leaders, Frank Brewster, Baker Perkins Co., and Charles Schofield, Chevrolet Motor Co., Gray Iron Foundry, Saginaw, Mich.

9:30 A. M.—Annual Business Meeting and Board of Awards Lecture

Presiding, President H. S. Washburn

Awarding of Medals

Address by Charles E. Wilson, Executive Vice-President, General Motors Corp, Detroit, Mich.

11:00 A. M. to 6:00 P. M.—Foundry Show Open

12:30 P. M.—Non-Ferrous Division Round Table Luncheon

Presiding, C. O. Thieme, H. Kramer & Co., Chicago, Ill.

Discussion Subject—*Metal Covers, Fluxes, Deoxidizers and Degasifier Practice*

12:30 P. M.—Malleable Division Round Table Luncheon

Chairman, A. M. Fulton, Northern Malleable Iron Co., Minneapolis, Minn.

Co-Chairmen, P. C. DeBruyne, Moline Malleable Iron Co., St. Charles, Ill., and J. H. Lansing, Malleable Founders' Society, Cleveland, O.

2:00 P. M.—Foundry Cost Session

Chairman, R. L. Lee, Liberty Foundry, Inc., Wauwatosa, Wis.

Round Table Discussion of Cost Methods

2:00 P. M.—Foundry Sand Research

Chairman, W. G. Reichert, American Brake Shoe & Foundry Co., Mahwah, N. J.

Co-Chairman, C. P. Randall, Hunt-Spiller Mfg. Co., Boston, Mass.

Flowability of Molding Sands, by P. E. Kyle, Massachusetts Institute of Technology, Cambridge, Massachusetts

Effect of Sand on the Properties of Cast Iron, by H. W. Dietert and E. E. Woodliff, Harry W. Dietert Co., Detroit, Mich.

Effect of Sand on the Properties of Cast Iron, by H. Womochel and C. C. Sigerfoos, Michigan State College, East Lansing, Mich.

Notes on the Clay Bonding of Molding Sand, by Harry L. Daasch, University of Vermont, Burlington, Vt.

4:00 P. M.—Gray Iron Shop Course (Session 3)

Chairman, V. A. Crosby, Climax Molybdenum Co., Detroit, Mich.

Cupola Control by Gas Control, by S. C. Massari, Association of Manufacturers of Chilled Car Wheels, Chicago, Ill.

7:00 P. M.—Non-Ferrous Division Annual Dinner

Presiding, Division Chairman Harold J. Roast, Canadian Bronze Co., Montreal

8:00 P. M.—Demonstration of Crystallization of Cast Metals (Second Showing)

Presiding, A. C. Davis, Cornell University, Ithaca, New York

Close-Ups of Crystal Behavior Illustrated by Microprojection—Demonstration by Dr. C. W. Mason, Cornell University, Ithaca, N. Y.

TO PRESENT PAPERS BEFORE CONVENTION MEETINGS

D. P. Forbes

R. J. Cowan

H. L. McKinnon

A. L. Armantrout

V. J. Sedlon

Frank Cech

AUTHORS OF PAPERS FOR CONVENTION MEETING

W. Levi

H. L. Daasch

F. G. Sefing

S. Healy

H. Ries

C. D'Amico

Thursday, May 9

9:00 A. M. to 5:30 P. M.—Foundry Show Open

9:00 A. M.—Sand Shop Course
(Session 3)

Core Room Practice

Chairman, E. C. Zirzow, National Malleable & Steel Castings Co., Cleveland, O.

Discussion Leader, Fred Weaver, Great Lakes Foundry Sand Co., Detroit, Mich.

10:00 A. M.—Foreman Training Session

Chairman, A. D. Lynch, J. I. Case Co., Racine, Wisconsin.

Round Table Discussion

10:00 A. M.—Steel Castings Session

Chairman, T. N. Armstrong, International Nickel Co., New York City.

Co-Chairman, H. M. Rishel, American Steel Foundries, Granite City, Ill.

Application of External Chills, by W. F. McKee, Key Co., E. St. Louis, Ill.

Committee Reports

10:00 A. M.—Sand Research Session

Chairman, D. L. Parker, General Electric Co., West Lynn, Mass.

Co-Chairman, N. J. Dunbeck, Eastern Clay Products Co., Eifort, O.

Recent Experiments with Gray Iron Synthetic Molding Sands, by Fulton Holtby and Herbert Scobie, University of Minnesota, Minneapolis, Minnesota

Some Considerations of Effects of High Temperature on Sands, by Dr. H. Ries, Cornell University, Ithaca, N. Y.

Sand Control in British Foundries, by J. J. Sheehan, Austin Motor Co., Ltd.. Birmingham, England (Official Exchange Paper—Institute of British Foundrymen)

Report of Technical Director, Foundry Sand Research Committee

12:30 P. M.—Gray Iron Division Round Table Luncheon

Presiding, Division Chairman G. P. Phillips, International Harvester Co., Chicago

2:00 P. M.—Gray Iron Session

Chairman, G. P. Phillips, International Harvester Co., Chicago

Co-Chairman, W. H. Spencer, Wilkening Mfg. Co., Philadelphia, Pa.

Effects of Sulphur on Properties of Electric Furnace Cast Irons, by Fulton Holtby and R. L. Dowdell, University of Minnesota, Minneapolis, Minn.

Effect of Varying the Silicon Content of Cast Iron, by F. G. Sefing, International Nickel Co., N. Y. C.

Desulphurization of Cast Iron from Practical Operating Standpoint, by W. Levi, Lynchburg Foundry Co., Radford, Va.

2:00 P. M.—Steel Session

Chairman, H. D. Phillips, Lebanon Steel Foundry, Lebanon, Pa.

Co-Chairman, R. A. Gezelius, General Steel Castings Corp., Eddystone, Pa.

Effects of Welding on the Structures of Some Cast and Wrouhgt Steels, Presented by The Lunkenheimer Co., Metallurgical Division, Per A. J. Smith and J. W. Bolton, Cincinnati, O.

Chaplets in Steel Castings, by H. F. Taylor and E. A. Rominski, Naval Research Laboratory, Anacostia Station, Washington, D. C.

2:00 P. M.—Safety and Hygiene Session

A Safety Program for Small Foundries, by P. E. Rentschler, Hamilton Foundry & Machine Co., Hamilton. O.

Workmen's Compensation and Occupational Disease Insurance, by Roger Bronson, Chicago, Ill.

4:00 P. M.—Gray Iron Shop Course
(Session 4)

Chairman, John Grennan, University of Michigan, Ann Arbor, Mich.

Ladle Additions of Graphite to Cast Iron, by A. H. Dierker, Ohio State University, Columbus, O.

4:30 P. M.—Demonstration of Crystallization of Cast Metals (Third Showing)

Presiding, R. Schneidewind, University of Michigan, Ann Arbor, Mich.

Close-Ups of Crystal Behavior Illustrated by Microprojection—Demonstration by Dr. C. W. Mason, Cornell University, Ithaca, N. Y.

SPEAKERS FOR CONVENTION SESSIONS

F. Holtby

John Lowe

R. Schneidewind

P. E. Rentschler

E. Touceda

E. K. Smith

J. A. Bowers

R. L. Dowdell

V. H. Schnee

W. F. McKee

C. H. Lorig

A. Boyles

(Thursday, May 9, Continued)

7:00 P. M.—A.F.A. Annual Dinner

Presiding, President H. S. Washburn.

As a section of the dinner the Chicago Chapter is sponsoring entertainment features and dance.

Friday, May 10

9:00 A. M. to 3:30 P. M.—Foundry Show Open

9:00 A. M.—Sand Shop Course

(Session 4)

Steel Foundry Practice

Chairman and Discussion Leader, L. H. Hahn, Sivyer Steel Casting Co., Chicago, Ill.

Discussion Leader, D. D. Cameron, Chicago Heights, Ill.

10:00 A. M.—Gray Iron Session

Chairman, H. Bornstein, Deere & Co., Moline, Ill.
Co-Chairman, A. L. Boegehold, General Motors Research Labs., Detroit, Mich.

The Damping Capacity, Electric and Thermal Conductivities and Endurance Properties of Some Gray Irons, by C. H. Lorig and V. H. Schnee, Battelle Memorial Institute, Columbus, O.

Cast Iron Cylinder Bores—Observations on Microstructure, Composition, Hardness and Wear, by E. K. Smith, Electro Metallurgical Co., Detroit, Mich.

Tendency of Some Cast Irons to Seize Under Sliding Friction, by A. H. Dierker, Ohio State University, Columbus, O.

Report of Coke Specifications Proposal for ASTM, by B. P. Mulcahy, Citizens Gas & Coke Utility, Indianapolis, Ind.

10:00 A. M.—Steel Session

Chairman, F. A. Melmoth, Detroit Steel Castings Co., Detroit, Mich.

Co-Chairman, D. C. Zuege, Sivyer Steel Casting Co,. Milwaukee, Wis.

Application of Controlled Directional Solidification to Large Steel Castings, by J. A. Duma and S. W. Brinson, Norfolk Navy Yard, Norfolk, Va.

12:30 P. M.—Steel Division Round Table Luncheon

Chairman, A. H. Jameson, Malleable Iron Fittings Co., Branford, Conn.

Co-Chairman, John Howe Hall, Philadelphia, Pa.

2:00 P. M.—Gray Iron Session

Chairman, S. C. Massari, Association of Manufacturers of Chilled Car Wheels, Chicago, Ill.

Co-Chairman, F. J. Walls, International Nickel Co., Detroit, Mich.

The Pearlitic Interval in Gray Iron, by Alfred Boyles, Battelle Memorial Institute, Columbus, O.

Formation of Various Types of Graphite Patterns in Gray Cast Iron, by C. D'Amico, and R. Schneidewind, University of Michigan, Ann Arbor, Mich.

Effects of Boron on Cast Iron, by G. M. Cover, Case School of Applied Science, Cleveland, O.

3:30 P. M.—Foundry and Allied Industries Show Closes

Preprints of Convention Papers

THE same policy for the distribution of preprints of papers for the 1940 convention will be followed as last year. Previous to the convention a list of the papers will be forwarded to each member with the members ordering copies of those papers they wish to receive. All those available before the convention will then be sent as requested.

Bound Volumes of Transactions Wanted

FREQUENT calls are received for copies of bound volumes of Transactions which are not available at the A.F.A. office. At present copies of Vols. 42 (1934) and 44 (1936) are in demand. Any member knowing of copies available is requested to write to the national A.F.A. office at 222 W. Adams St., Chicago.

Bound volumes of which supplies are available are listed below. Any members wanting to complete their libraries should order these now while the supplies hold out. These contain a large number of exceedingly valuable papers for reference purposes.

Bound Vol. No.	Year	No. of Papers	Price to Members	Price to Non-Members
47	1939	1030	$3.00	$15.00
46	1938	950	3.00	15.00
45	1937	850	3.00	15.00
41	1933	608	2.00	10.00

Remember—Convention Schedule on Daylight Savings Time One Hour Ahead of Train Time.

Dr. C. W. Mason

To Present Series of Crystallization Demonstrations at Convention

Medals to Patch, Vial, Melmoth and Dietert— Honorary Membership to George Long

THE Board of Awards has announced that the four gold medals of the association and one honorary life membership are to be awarded at the 1940 Convention in May, for distinguished service and contributions to the foundry industry.

The John A. Penton Gold Medal is to go to Nathaniel K. B. Patch, past president, A.F.A., 1930-31, and secretary, Lumen Bearing Co., Buffalo.

The J. H. Whiting Gold Medal is to be awarded to Frederick Ketchum Vial, vice president and director, Griffin Wheel Co. and Association of Manufacturers of Chilled Car Wheels, Chicago.

The Joseph S. Seaman Gold Medal is being presented to Frederick A. Melmoth, vice president and works manager, Detroit Steel Castings Co., Detroit.

The William H. McFadden Gold Medal is to be awarded to Harry Walter Dietert, president, Harry W. Dietert Co., Detroit.

George A. T. Long, foundry service department, Pickards Mather & Co., Chicago, nationally known for his advisory work on cupola melting and probably the only foundryman living who has attended all the A.F.A. conventions since the association was organized in 1896, is to be recognized by being made an honorary life member.

The four medal awards were established by the association in 1920 through funds donated by four past officers of the association whose names are connected with the medals. The awarding of the medals is made on the recommendation of an Awards Board composed of the last seven living past presidents. The present members of the Board of Awards are:

Marshall Post, Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa., (President 1938-39).

H. Bornstein, Deere & Co., Moline, Ill. (President 1937-38).

J. L. Wick, Jr., Falcon Bronze Co., Youngstown, O. (President 1936-37).

D. M. Avey, Tulsa, Okla. (President 1934-36).

Frank J. Lanahan, Ft. Pitt Malleable Iron Co., Pittsburgh, Pa. (President 1933-34).

T. S. Hammond, Whiting Corp., Harvey, Ill. (President 1932-33).

E. H. Ballard, General Electric Co., West Lynn, Mass. (President 1931-32).

N. K. B. Patch

NATHANIEL K. B. PATCH, honorary member and past president of the A. F. A., is to receive the John A. Penton Gold Medal. Mr. Patch, who served as president in 1930-31 has been active in the Association for many years, serving on many committees, elected as a director in 1926 and vice president in 1929.

Mr. Patch has been very prominent in technical organizations connected with the brass founding industry, being one of the original organizers of the American Brass Founders' Association, later the Non-Ferrous Division, A.I.M.E., elected one of the first directors of this association and serving as president in 1911. Besides being actively associated with technical committees of the A.F.A., he was chairman of the Committee on Non-Ferrous Metals of the American Society for Testing Materials. He has been a member of the American Chemical Society, American Electro-Chemical Society, Institute of Metals (British), Institute of Metals Division of the A.I.M.E., the Buffalo Engineering Society, and the Buffalo Chamber of Commerce.

Mr. Patch was educated in the schools of Buffalo and Massachusetts Institute of Technology and entered the employ of the Lumen Bearing Co. in 1901, when his firm was organized, and has

N. K. B. Patch

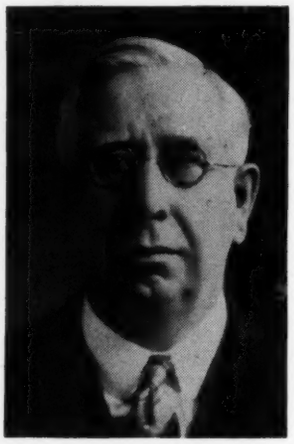
remained with this company ever since. He spent four years as a salesman, then in 1904 was made manager of the Canadian plant. Later he was promoted to the position of general superintendent of the Buffalo plant, which position he filled until he was made works manager. In 1923 he retired as works manager because of impaired eyesight to assume the duties of secretary and advertising manager.

F. K. Vial

FREDERICK KETCHUM VIAL, director and vice president of the Griffin Wheel Co. and the Association of Manufacturers of Chilled Car Wheels, Chicago, is being awarded the 1940 J. H. Whiting Gold Medal for his outstanding work in the development of cupola melting processes, especially as shown in his work on the Griffin hot blast process.

Born in Lyonsville, Ill., April 22, 1864, Mr. Vial received his M.S. degree from the University of Illinois in 1886 and his professional civil engineering degree in 1918. Early in his career he became connected with the railway service, when in 1892 he was employed as rod man with the Atchison, Topeka & Santa Fe RR. From 1895 to 1896 he served as chief engineer of the Ajax Forge Co. of Chicago, and from 1897 to 1902 as principal assistant engineer of the Chicago & West-

ern Indiana RR. In 1902 Mr. Vial joined the Griffin Wheel Co., Chicago, first as mechanical engineer (1902-1906), then as chief engineer in charge of manufacturing (1906-1924) and then as vice president, which position he still retains. In 1917 he was also made a director of this company.



F. K. Vial

On the formation of the Association of Manufacturers of Chilled Car Wheels, Mr. Vial, in 1906, was selected as consulting engineer for this organization, of which he is now vice president.

As a member of the A.F.A., American Society for Testing Materials, Western Society of Engineers and Air Brake Association, Mr. Vial has presented an extensive list of technical papers relating to research, car wheels, railway problems and cupola melting processes. He has also collaborated in the preparation of research bulletins of the University of Illinois, Purdue University, Massachusetts Institute of Technology and Battelle Memorial Institute. Many patents are credited to Mr. Vial, these dealing largely with car wheels, molding methods and melting processes. For his achievements he has already been recognized by many organizations through medals and honorable mention. His activities have had a profitable influence on the improvements in railway appliances and foundry methods.

F. A. Melmoth

FREDERICK A. MELMOTH, vice president and works manager, Detroit Steel Castings Co., Detroit, is being awarded the 1940 Joseph S. Seaman Gold Medal for his outstanding contributions to the steel casting industry.

Mr. Melmoth was born near Sheffield, England, and received his technical training at Sheffield University, later holding an associateship in metallurgy at this university which awarded him the Mappen medal for honors in 1913. From 1908 to 1917 he was connected with the Brown-Bayleys Steel Works, Sheffield, as assistant metallurgist and steel maker. From 1918 to 1926 he was associated with Lake and Elliott of Braintree, England, and the National Steel Foundry, Scotland, as foundry manager and metallurgist and consultant respectively. In 1926 Mr. Melmoth accepted the position of foundry manager, Thos. Firth & Sons, Ltd., Sheffield, which position he held until 1930 when he came to this country, taking a position with the Detroit Steel Casting Co., where he is now vice president. Mr. Melmoth is a member of the A.F.A., the A.S.M. and, through his firm, is connected with the Steel Founders' Society. He has written extensively for the trade and technical press on various phases of steel making, steel founding and malleable iron.

F. A. Melmoth

H. W. Dietert

HARRY WALTER DIETERT, president, Harry W. Dietert Co., Detroit, has been awarded the 1940 Wm. H. McFadden Gold Medal for the work he has done in promoting interest in foundry sand research and control. He has served on the A.F.A. Sand Research Committee almost continuously since the committee was started in 1921 and has played a prominent part in developing sand control methods, in research work, in presenting papers on sand control and by lecturing on this subject before practically all the foundry groups throughout the United States. As a member of the A.F.A. Foundry Sand Research Committee he has worked on the Committee on Conservation and Reclamation, Committee on Tests, Subcommittee on Core Tests, Subcommittee on Hardness Testing and Mold Permeability, Subcommittee on Durability, Subcommittee on Grading and Fineness, Subcommittee on Flowability and Subcommittee on Physical Properties of Foundry Sands at Elevated Temperatures.

H. W. Dietert

Born in Texas, Mr. Dietert received his early technical training at Iowa State College, Ames, Ia., graduating in 1920 with a B.S. degree in mechanical engineering. After two years at the Philadelphia Works of the Westinghouse Electric & Mfg. Co., he became instructor in charge of shops at Rice Institute, Houston, Texas. During 1922-23 he carried on graduate

work at the University of Illinois, receiving an M.S. degree. He then joined the engineering staff of the U. S. Radiator Corp., Detroit, as research engineer and was instrumental in developing their sand control methods. Later he was made chief engineer of that company, resigning this position to head his own company for the manufacture of sand testing equipment and research consulting work, although he retains a connection with the U. S. Radiator Corp. as consultant.

Board of Awards Address by C. E. Wilson, General Motors Corporation

THE high spot of the annual convention will be the annual business meeting on the morning of May 8 at the Palmer House. Following the presentation of medal awards, the principal address will be delivered by Charles E. Wilson, Executive Vice President, General Motors Corporation. This will be the third annual Awards Board address, with Mr. Wilson discussing industrial relations, a subject on which he is especially qualified to speak as in his recent years with the General Motors Corporation he has given much attention to labor problems and business planning of production of the parts and accessory companies of the corporation.

Mr. Wilson, a native of Minerva, Ohio, became associated with the General Motors Corporation in 1919 as chief engineer and sales manager of the Automobile Division of the Remy Electric Company, a subsidiary of the corporation. His previous connection was with the Westinghouse Electric and Manufacturing Co., which he joined shortly after being graduated from Carnegie Institute of Technology in 1909 with a degree in electrical engineering. Since going with the General Motors Corporation in 1919, Mr. Wilson has, through his outstanding ability, risen rapidly from one responsible position to another.

In 1921 he was made factory manager of the Remy Electric Company and in 1925 became general manager of the company. A year later, when the Dayton Engineering Laboratories Company was added to the Remy Electric Company, Mr. Wilson continued as president and general manager of the newly organized Delco-Remy Corp., which then employed about 12,000 people.

During the next two years, the Delco - Remy Corp., under his direction, developed the Lovejoy shock absorbers, industrial motors for refrigeration and washing machines, automobile lamps and Delco batteries. At the end of 1928 the Delco-Remy Div. was operating in four cities. The division had the production of electrical equipment for motor cars concentrated in Anderson, Ind.; shock absorbers and industrial motors in Dayton, O.; automobile lamps in Anderson and Cleveland, and batteries in Muncie, Ind.

C. E. Wilson

In December, 1928, he was made a vice president of the General Motors Corp. and transferred to Detroit. During the next two or three years, Mr. Wilson was especially interested in acquiring properties to expand the corporation's activities, and in developing its parts and accessory business. During this period he arranged for the purchase of the following properties and businesses: The Winton Engine Company and the Electromotive Company of Cleveland; the Northeast Electric Company of Rochester; the Allison Engineering Company of Indianapolis; the Sunlight Electrical Company and the Packard Electric Company of Warren, O. He also assisted in arranging for the purchase of minority interests in the Bendix Aviation Corp. and the North American Aviation Corp.

For several years previous to being made executive vice president of the General Motors Corporation, Mr. Wilson was especially interested in the operation of the parts and accessory companies, labor problems and business planning of production.

Apprentice Contest Display

DURING the annual convention in Chicago in May, castings and patterns made in local apprentice molding and pattern making contests will be on display as one of the exhibits at the Foundry Show.

The display is a result of the efforts of the A.F.A. Apprentice Training Committee which for many years has been conducting annual contests in gray iron molding, steel molding, non-ferrous molding and pattern making. Patterns for the molding contests and blueprints for the pattern making contest selected by the committee are sent around to the different foundry centers where the local competitions are held. Winners of these local contests are forwarded to the annual convention where a national committee of judges reviews the entries and make first, second and third prize awards in each group.

This year local competitions are being held at St. Louis, Moline, Milwaukee, Detroit, Cleveland, Providence, Chicago, Peoria, Ill., and Birdsboro, Pa. Some three hundred foundries and pattern shops will be represented in the local competitions.

Partial List of Exhibitors

1940 Foundry and Allied Industries Show

International Amphitheatre, Chicago — May 4, 6, 7, 8, 9, 10

Abrasive Company ..... Philadelphia, Pa.
Adams Co. ..... Dubuque, Ia.
Air Reduction Sales Co. ..... New York, N. Y.
Ajax Electric Furnace Corp. ..... Philadelphia, Pa.
Ajax Electrothermic Corp. ..... Trenton, N. J.
Ajax Metal Co. ..... Philadelphia, Pa.
Allis-Chalmers Mfg. Co. ..... Milwaukee, Wis.
Alpha-Lux Co., Inc. ..... New York, N. Y.
American Air Filter Co. ..... Louisville, Ky.
American Crucible Co. ..... Shelton, Conn.
American Foundry Equipment Co. ..... Mishawaka, Ind.
American Gum Products Co. ..... New York, N. Y.
American Metal Market ..... New York, N. Y.
American Optical Co. ..... Chicago, Ill.
American Steel Abrasives Co. ..... Galion, Ohio
American Viscostat Co. ..... Chicago, Ill.
Apex Smelting Co. ..... Chicago, Ill.
Arcade Mfg. Co. ..... Freeport, Ill.
Atlas Pattern Co. ..... Chicago, Ill.
Automatic Transportation Co. ..... Chicago, Ill.
Ayers Mineral Co. ..... Zanesville, Ohio

Barrett-Cravens Co. ..... Chicago, Ill.
C. O. Bartlett & Snow Co. ..... Cleveland, Ohio
Bausch & Lomb Optical Co. ..... Rochester, N. Y.
Beardsley & Piper Co. ..... Chicago, Ill.
Belle City Malleable Iron Co. ..... Racine, Wis.
Bethlehem Steel Co. ..... Bethlehem, Pa.
Black & Decker Mfg Co. ..... Towson, Md.
Black, Sivalls & Bryson, Inc. ..... Kansas City, Mo.
Blystone Corp. ..... Cambridge Springs, Pa.
Bradley Washfountain Co. ..... Milwaukee, Wis.
Adolph I. Buehler ..... Chicago, Ill.

Campbell-Hausfeld Co. ..... Harrison, Ohio
Carborundum Co., Abrasive Div. ..... Niagara Falls, N. Y.
Carborundum Co., Refractory Div. ..... Perth Amboy, N. J.
Edwin S. Carman, Inc. ..... Cleveland, O.
Certified Core Oil & Mfg. Co. ..... Chicago, Ill.
Chain Belt Co. ..... Milwaukee, Wis.
Champion Foundry & Machine Co. ..... Chicago, Ill.
Chicago Mfg. & Distributing Co. ..... Chicago, Ill.
Chicago Retort & Fire Brick Co. ..... Chicago, Ill.
Clearfield Machine Co. ..... Clearfield, Pa.
ClerSite Co. ..... New York, N. Y.
Cleveland Quarries Co. ..... Cleveland, Ohio
Climax Molybdenum Co. ..... New York, N. Y.
Coffing Hoist Co. ..... Danville, Ill.
L. S. Cohen & Co., Inc. ..... Chicago, Ill.
L. A. Cohn & Bro., Inc. ..... Chicago, Ill.
Combined Supply & Equipment Co., Inc. ..... Buffalo, N. Y.
Conco Engineering Works ..... Mendota, Ill.
Continental Roll & Steel Foundry Co. ..... East Chicago, Ind.
Corn Products Sales Co. ..... New York, N. Y.
Crucible Furnace Co., Inc. ..... Charlottesville, Va.

Dayton Oil Company ..... Dayton, Ohio
Delhi Foundry Sand Co. ..... Cincinnati, Ohio
Delta Oil Products Co. ..... Milwaukee, Wis.
Wm. Demmler & Bros. ..... Kewanee, Ill.
Detroit Electric Furnace Co. ..... Bay City, Mich.
De Walt Products Co. ..... Lancaster, Pa.
Harry W. Dietert Co. ..... Detroit, Mich.
Dings Magnetic Separator Co. ..... Milwaukee, Wis.
Joseph Dixon Crucible Co. ..... Jersey City, N. J.
Duquesne Smelting Corp. ..... Pittsburgh, Pa.

Eastern Clay Products, Inc. ..... Eifort, Ohio
The Electric Controller & Mfg Co. ..... Cleveland, Ohio
Electro-Chemical Pattern & Mfg. Co. ..... Detroit, Mich.
Electro Metallurgical Co. ..... New York, N. Y.
Electro Refractories & Alloys Corp. ..... Buffalo, N. Y.
Elwell-Parker Electric Co. ..... Cleveland, Ohio

Federal Foundry Supply Co. ..... Cleveland, Ohio
Federated Metals Div., A. S. & R. Co. ..... Whiting, Ind.
Fisher Furnace Co. ..... Chicago, Ill.
The Foundry ..... Cleveland, Ohio
Foundry Equipment Co. ..... Cleveland, Ohio
Foundry Supplies Mfg. Co. ..... Chicago, Ill.
Foxboro Co. ..... Foxboro, Mass.

Freeman Supply Co. ..... Toledo, Ohio
Fremont Flask Co. ..... Fremont, Ohio

Globe Steel Abrasive Co. ..... Mansfield, Ohio
Great Lakes Foundry Sand Co. ..... Detroit, Mich.
Great Western Mfg. Co. ..... Leavenworth, Kans.

Hanna Furnace Co. ..... Ecorse, Mich.
Harnischfeger Corp. ..... Milwaukee, Wis.
Benjamin Harris & Co. ..... Chicago Heights, Ill.
Harrison Abrasive Corp. ..... Rockford, Ill.
Hercules Powder Co., Inc. ..... Wilmington, Del.
Herman Pneumatic Machine Co. ..... Pittsburgh, Pa.
Hickman, Williams & Co. ..... Chicago, Ill.
Hill & Griffith Co. ..... Cincinnati, Ohio
Hines Flask Co. ..... Cleveland, Ohio
Hougland & Hardy, Inc. ..... Evansville, Ind.
E. F. Houghton & Co. ..... Philadelphia, Pa.
Howell Industrial Truck Co. ..... Cleveland, Ohio
Hydro Blast Corp. ..... Chicago, Ill.

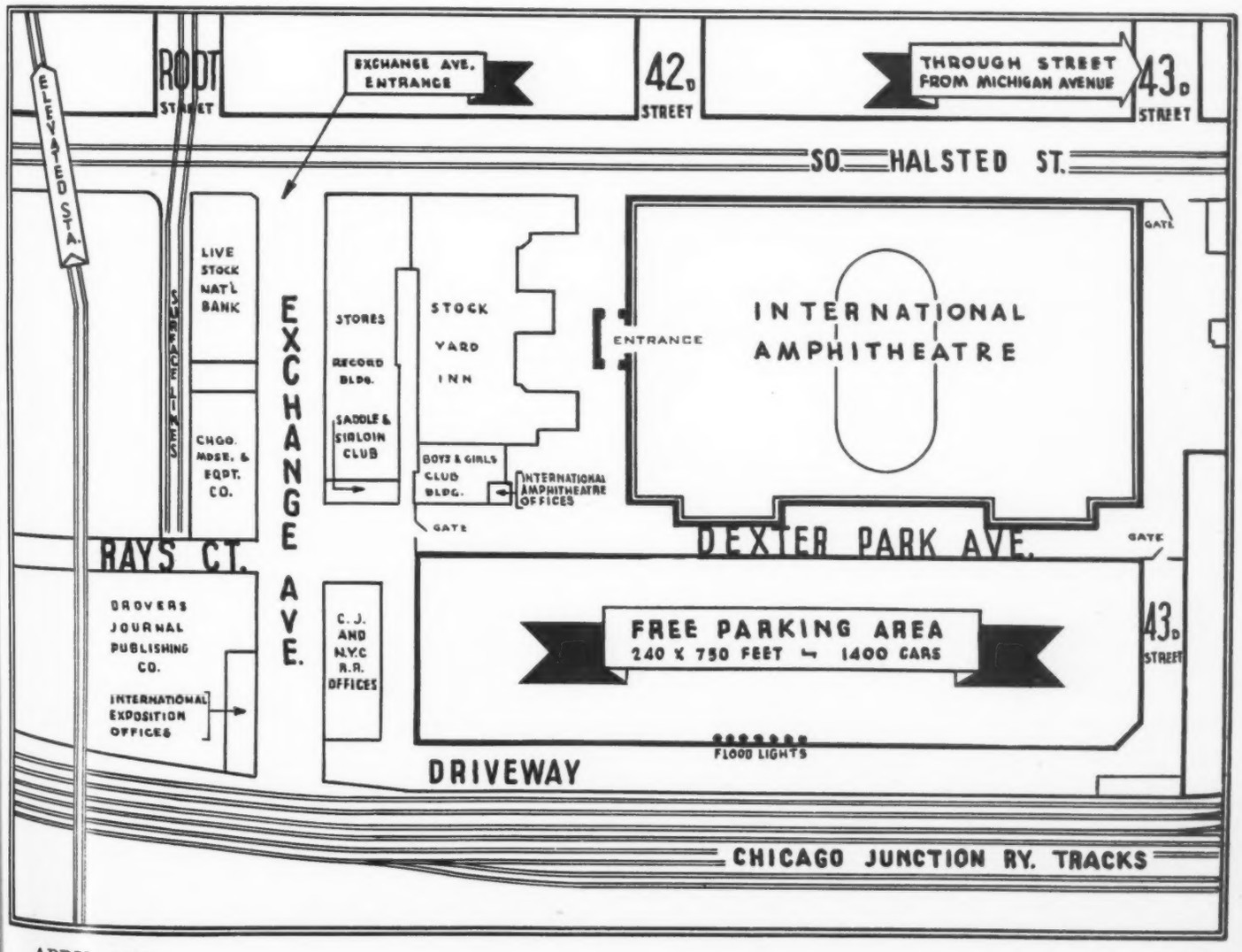
Illinois Clay Products Co. ..... Chicago, Ill.
Illinois Testing Laboratories, Inc. ..... Chicago, Ill.
Industrial Minerals Co. ..... Lancaster, Ohio
Ingersoll-Rand Co. ..... Phillipsburg, N. J.
International Graphite & Electrode Corp. ..... St. Marys, Pa.
International Molding Machine Co. ..... Chicago, Ill.
International Nickel Co., Inc. ..... New York, N. Y.

Jeffrey Mfg. Co. ..... Columbus, Ohio
William F. Jobbins, Inc. ..... Aurora, Ill.
Johnston & Jennings Co. ..... Cleveland, Ohio

Keller Mechanical Engineering Corp. ..... Brooklyn, N. Y.

Kindt-Collins Co.	Cleveland, Ohio
H. Kramer & Co.	Chicago, Ill.
Lancaster Iron Works, Inc.	Lancaster, Pa.
Lava Crucible Co. of Pittsburgh	Pittsburgh, Pa.
R. Lavin & Sons, Inc.	Chicago, Ill.
Linde Air Products Co.	New York, N. Y.
Link-Belt Co.	Chicago, Ill.
Louden Machinery Co.	Fairfield, Iowa
Lovejoy Flexible Coupling Co.	Chicago, Ill.
Macklin Co.	Jackson, Mich.
Paul Maehler Co.	Chicago, Ill.
Mall Tool Co.	Chicago, Ill.
Martindale Electric Co.	Cleveland, Ohio
J. S. McCormick Co.	Pittsburgh, Pa.
Mercury Mfg. Co.	Chicago, Ill.
Michigan Smelting & Refining Co.	Detroit, Mich.
Mid-West Abrasive Co.	Detroit, Mich.
Milwaukee Foundry Equipment Co.	Milwaukee, Wis.
Mine Safety Appliances Co.	Pittsburgh, Pa.
Modern Equipment Co.	Port Washington, Wis.
Nassau Smelting & Refining Co.	New York, N. Y.
National Carbon Co., Inc.	Detroit, Mich.
National Engineering Co.	Chicago, Ill.
Newaygo Engineering Co.	Newaygo, Mich.
Niagara Falls Smelting & Refining Corp.	Buffalo, N. Y.
Wm. H. Nicholls, Inc.	Richmond Hill, N. Y.
Norton Company	Worcester, Mass.
S. Obermayer Co.	Chicago, Ill.
Oliver Machinery Co.	Grand Rapids, Mich.
Tinius Olsen Testing Machine Co.	Philadelphia, Pa.
Osborn Mfg. Co.	Cleveland, Ohio
Pangborn Corp.	Hagerstown, Md.
Parsons Engineering Co.	Cleveland, Ohio
Peerless Mineral Products Co.	Conneaut, Ohio
George M. Pendergast & Co.	Milwaukee, Wis.
George F. Pettinos, Inc.	Philadelphia, Pa.
Pickands, Mather & Co.	Chicago, Ill.
Pittsburgh Crushed Steel Co.	Pittsburgh, Pa.
Pittsburgh Lectromelt Furnace Corp.	Pittsburgh, Pa.
Productive Equipment Corp.	Chicago, Ill.
Pyro Clay Products Co.	Oak Hill, Ohio
Pyrometer Instrument Co.	New York, N. Y.
Ramtite Co.	Chicago, Ill.
N. Ransohoff, Inc.	Cincinnati, Ohio
The Ready-Power Co.	Detroit, Mich.
Reliable Pattern & Castings Co.	Cincinnati, Ohio
Republic Coal & Coke Co.	Chicago, Ill.
Republic Steel Corp.	Cleveland, Ohio
Riehle Testing Machine Div.	East Moline, Ill.
Robeson Process Co.	New York, N. Y.
Robins Conveying Belt Co.	New York, N. Y.
Roots-Connersville Blower Co.	Connersville, Ind.
Rotor Tool Co.	Cleveland, Ohio
Royer Foundry & Machine Co.	Kingston, Pa.

(Concluded on Page 14)



List of Exhibitors

(Concluded from Page 13)

Safety Engineering	New York, N. Y.
Safety Equipment Service Co.	Cleveland, Ohio
Sand Products Corp.	Detroit, Mich.
Schmieg Sheet Metal Co.	Detroit, Mich.
Claude B. Schneible Co.	Chicago, Ill.
Schramm, Inc.	West Chester, Pa.
F. E. Schundler & Co., Inc.	Joliet, Ill.
Scientific Cast Products Corp.	Cleveland, Ohio
Semet-Solvay Co.	New York, N. Y.
Simplicity Engineering Co.	Durand, Mich.
Sloss-Sheffield Steel & Iron Co.	Birmingham, Ala.
W. W. Sly Mfg. Co.	Cleveland, Ohio
Smith & Caffrey Co.	Syracuse, N. Y.
Smith & Richardson Mfg. Co.	Geneva, Ill.
Eugene W. Smith, Inc.	Evansville, Ind.
Werner G. Smith Co.	Cleveland, Ohio
Smith Facing & Supply Co.	Cleveland, Ohio
Smith Oil & Refining Co.	Rockford, Ill.
Spencer Turbine Co.	Hartford, Conn.
SPO, Inc.	Cleveland, Ohio
Sta-Brite Mfg. Co.	Chicago, Ill.
Standard Sand & Machine Co.	Chicago, Ill.
Steelblast Abrasives Co.	Cleveland, Ohio
Steel Conversion & Supply Co.	Pittsburgh, Pa.
Steel Shot & Grit Co.	Boston, Mass.
Sterling Wheelbarrow Co.	Milwaukee, Wis.
Frederic B. Stevens, Inc.	Detroit, Mich.
Swan Finch Oil Corp.	Chicago, Ill.
Tabor Mfg. Co.	Philadelphia, Pa.
Taggart & Co.	Philadelphia, Pa.
Tamms-Silica Co.	Chicago, Ill.
Titanium Alloy Mfg. Co.	Niagara Falls, N. Y.
Truscon Steel Co.	Youngstown, Ohio
W. S. Tyler Co.	Cleveland, O.
Union Carbide & Carbon Corp.	New York, N. Y.
United Compound Co.	Buffalo, N. Y.
United States Graphite Co.	Sagniaw, Mich.
United States Hoffman Machinery Corp.	New York, N. Y.
U. S. Reduction Co.	East Chicago, Ind.
Vanadium Corp. of America	New York, N. Y.
Velsicol Corp.	Chicago, Ill.
Vesuvius Crucible Co.	Swissvale, Pa.
West Michigan Steel Foundry Co.	Muskegon, Mich.
Western Materials Co.	Chicago, Ill.
Western Metal Co.	Chicago, Ill.
Wheelco Instruments Co.	Chicago, Ill.
Wheeling Steel Corp.	Wheeling, W. Va.
White Pine Lumber Co.	Chicago, Ill.
Whitehead Brothers Co.	New York, N. Y.
Whiting Corp.	Harvey, Ill.
Wilson Welder & Metals Co., Inc.	New York, N. Y.
Wisconsin Steel Co.	Chicago, Ill.
Yale & Towne Mfg. Corp.	Philadelphia, Pa.
Zanesville Sand Co.	Zanesville, Ohio

The Home of the Foundry Show

THE International Amphitheatre, a modern building, offers unusual accommodations for "heavy industrial operating shows." The space to be occupied is all on the ground floor. The clay floor in the Arena is especially well adapted for exhibits requiring pits and foundations below floor level.

All meetings of the Association scheduled during exhibit hours will be held in the immediately adjoining Stock Yard Inn and Saddle and Sirloin Club. Convention registration headquarters will be at the north end of the North Wing.

Transportation from downtown hotels will be by elevated and surface lines supplemented with frequent bus service and taxicabs. Cafeteria in the Amphitheatre and dining rooms in Stock Yard Inn and Saddle and Sirloin Club will provide adequate service for all-day attendance at sessions and exhibits.

The Saturday Preview, which proved so satisfactory at Cleveland in 1938, will provide an opportunity for all men of the industry in the Chicago area to inspect the exhibits before arrival of thousands from all over the country for Annual Foundrymen's Week.

Fair Play

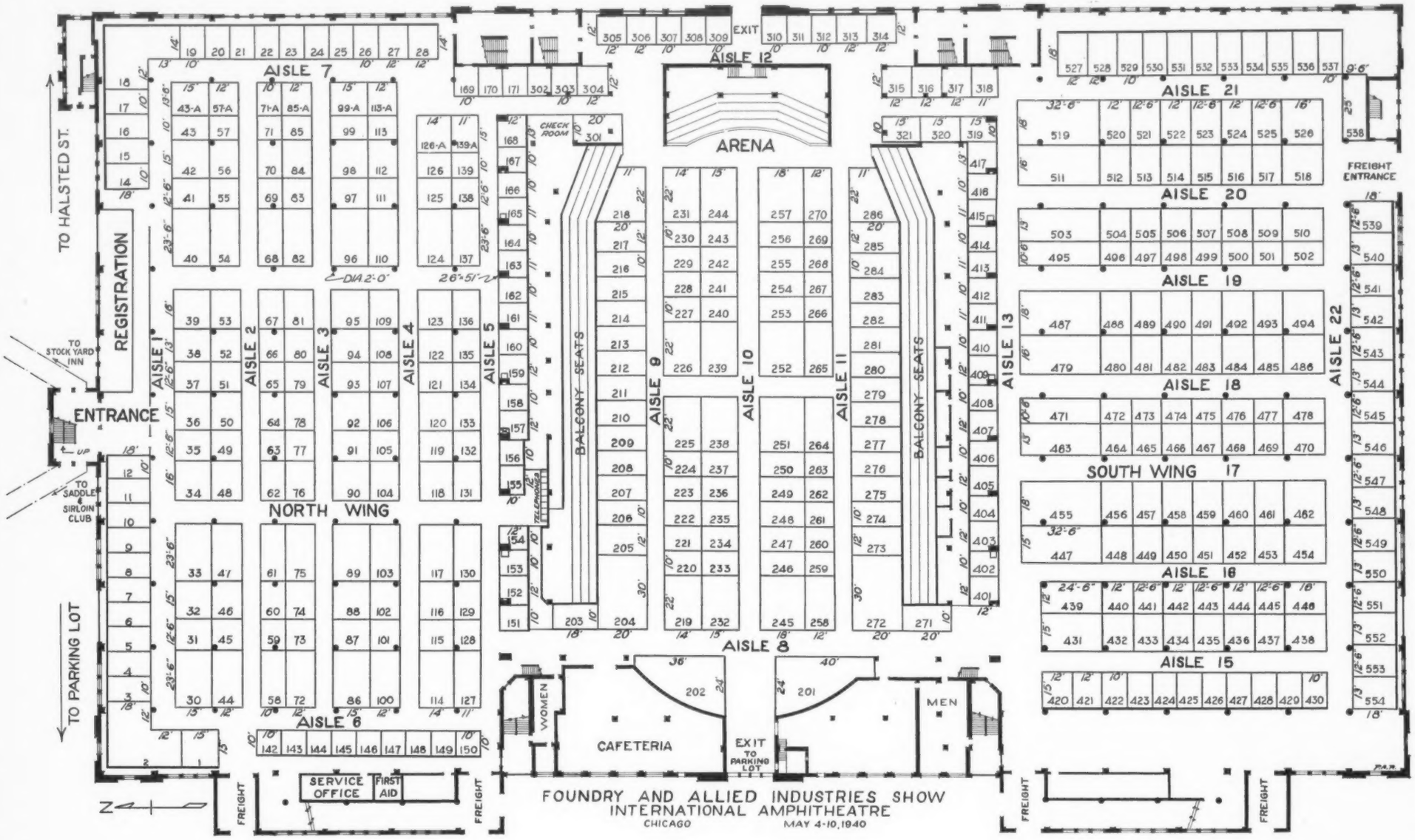
THOUSANDS of men of the industry will come to Chicago for Foundrymen's Week May 6 to 10 that they may benefit themselves and the companies they represent through attendance at sessions of particular interest and by inspection of exhibits of equipment and materials.

Those who present papers, reports of studies and research and those who make exhibits provide the attractions that will bring this attendance. In their behalf and in the interest of fair play we discourage and protest competitive activities of any nature during Convention and Exhibit hours by those who would profit from an attendance they are not contributing their part toward securing.

We believe all fair-minded men will wholeheartedly subscribe to the following sentiments appearing in an issue of the *Foundry Trade Journal* published following a convention and exhibit of the *Institute of British Foundrymen:*

"Any manufacturer or supplier to foundries is, of course, perfectly at liberty to determine for himself whether he wishes to support the trade organization and the trade exhibition, and no one can blame him if for any reason he does not see his way clear to do so. We do, however, feel that we are entitled to expect that a manufacturer or supplier who is perfectly eligible to take part in these enterprises and who elects not to do so should most scrupulously abstain, to put it mildly, from giving the universal impression of attempting to benefit from these undertakings without contributing to them. We are sure that any of our exhibitors who had every reason to be proud of their displays would be quite willing that these should be inspected by their competitors, but trust you will agree with us that for firms to send their representatives on practically every day of the Exhibition to spend their time in conversation—no doubt about the weather—with prospective customers is a source of legitimate irritation to those who have spent considerable sums of money to insure what is generally admitted to be the great success of the Exhibition."

PLAY FAIR.


TO HALSTED ST.
REGISTRATION
TO STOCK YARD INN
ENTRANCE
UP
TO SADDLE & SIRLOIN CLUB
TO PARKING LOT
AISLE 1
AISLE 2
AISLE 3
AISLE 4
AISLE 5
AISLE 6
AISLE 7
AISLE 8
AISLE 9
AISLE 10
AISLE 11
AISLE 12
AISLE 13
AISLE 15
AISLE 16
AISLE 17
AISLE 18
AISLE 19
AISLE 20
AISLE 21
AISLE 22
NORTH WING
SOUTH WING
ARENA
CHECK ROOM
TELEPHONES
BALCONY SEATS
BALCONY SEATS
EXIT
FREIGHT ENTRANCE
WOMEN
MEN
CAFETERIA
EXIT TO PARKING LOT
SERVICE OFFICE
FIRST AID
FREIGHT
FREIGHT
FREIGHT
FOUNDRY AND ALLIED INDUSTRIES SHOW
INTERNATIONAL AMPHITHEATRE
CHICAGO
MAY 4-10, 1940

Chicago Chapter Appoints Committees to Entertain Convention Guests

ANTICIPATING a large number of A.F.A. members and guests attending the annual Convention and Foundry Show, the Chicago Chapter, host to the Convention, has appointed committees to arrange for the reception and entertainment of those present. Chapter Chairman C. E. Westover, with the Board of the Chapter and committee chairmen, will form the general committee. The personnel of this committee and other special committees is shown below:

General Committee

Chairman, C. E. Westover, Burnside Steel Foundry Co.
Vice Chairman, G. P. Phillips, International Harvester Co.
Secretary, L. L. Henkel, Interlake Iron Corp.
Treasurer, C. C. Kawin, C. C. Kawin Co.
J. D. Burlie, Western Electric Co.
A. W. Gregg, Whiting Corp.
W. H. Parker, American Steel Foundries.
L. J. Wise, Chicago Mall. Castings Co.
J. J. Fox, Wisconsin Steel Co.
H. W. Johnson, Northwestern Foundry Co.
W. C. Packard, National Engineering Co.
H. Kenneth Briggs, Miller & Co.
B. J. Aamodt, National Mall. & Steel Castings Co.
L. F. Lottier, Peoples Gas, Light & Coke Co.
J. H. Abbott, Hickman, Williams & Co.
L. H. Rudesill, Griffin Wheel Co.
P. V. Martin, Carnegie-Illinois Steel Co.
James Suttie, American Steel Foundries
James Thomson, Continental Roll & Steel Foundry Co.

Reception Committee

Chairman, G. P. Phillips, International Harvester Co.
Honorary Chairmen, Gen. T. S. Hammond and W. R. Bean, past presidents, American Foundrymen's Association
E. O. Beardsley, Beardsley & Piper Co.
E. L. Berry, Link-Belt Co.
F. E. Clark, W. E. Pratt Mfg. Co.
W. E. Crocombe, American Manganese Steel Div.
R. R. Fauntleroy, Moline Mall. Iron Co.
David Evans, Chicago Steel Foundry Co.
A. D. Edwards, Woodruff & Edwards, Inc.
H. S. Faust, Hansell-Elcock Co.
Stanley Prybylski, Tarrant Foundry Co.
V. P. Rumely, Crane Co.
O. F. Seidenbecker, Wisconsin Steel Co.
H. S. Simpson, National Engineering Co.
J. S. Townsend, Carnegie-Illinois Steel Co.
J. T. Osler, Continental Roll & Steel Foundry Co.
F. A. Snyder, Kankakee Foundry Co.
W. H. Burgess, Illinois Malleable Iron Co.
D. N. Gellert, Nichol-Straight Foundry Co.
W. L. Beaudway, Chicago Malleable Castings Co.
A. J. Johnston, Hickman, Williams & Co.
W. G. Jones, W. A. Jones Foundry & Machine Co.
Kenneth Jensen, Kensington Steel Co.
C. R. Lindgren, Lindgren Foundry Co.
G. A. T. Long, Pickands Mather & Co.
C. B. Magrath, Greenlee Foundry Co.
R. D. Phelps, Francis & Nygren Foundry Co.
E. B. Sherwin, Chicago Hardware Foundry Co.
F. B. Thacher, Interlake Iron Corp.
F. K. Vial, Griffin Wheel Co.
A. Walcher, American Steel Foundries
H. F. Wardwell, Burnside Steel Foundry Co.
C. F. Wells, Chicago Foundry Co.
H. E. Meng, W. D. Allen Mfg. Co.
H. W. Huddleson, Central Pattern & Foundry Co.
A. F. Zitzewitz, Sheffield Foundry Co.

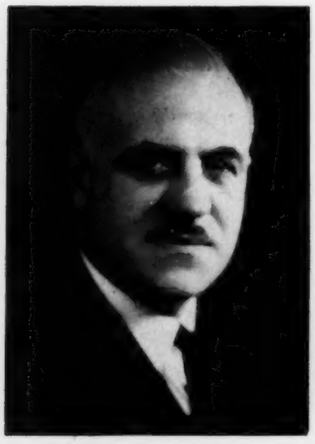
Annual Dinner Entertainment Committee

Chairman, P. V. Martin, Carnegie-Illinois Steel Co.
J. H. Abbott, Hickman Williams & Co.
B. J. Aamodt, National Mall. & Steel Castings Co.
W. E. Brewster, Wisconsin Steel Co.
H. A. Forsberg, Continental Roll & Steel Fdry. Co.
J. C. Gore, Werner G. Smith Co.
M. F. Becker, Whiting Corp.
H. F. Henninger, International Harvester Co.
W. C. Hutchins, Pyle National Co.
H. Cullen, Carnegie-Illinois Steel Co.
R. A. Lindgren, Wisconsin Steel Co.
H. B. Hoge, Western Foundry Co.
Edw. Longenback, American Manganese Steel Div.
T. J. Magnuson, J. S. McCormick Co.
O. C. Olson, S. Obermayer Co.
H. E. Orr, Burnside Steel Foundry Co.
J. H. Owen, Harbison-Walker Refractories Co.
W. C. Packard, National Engineering Co.
W. H. Parker, American Steel Foundries

Foundry Show Preview Day Committee

Chairman, L. H. Rudesill, Griffin Wheel Co.
Martin Rintz, Continental Roll & Steel Foundry Co.
G. B. Stantial, Illinois Malleable Iron Co.
A. W. Gleason, Carnegie-Illinois Steel Co.
M. J. Lefler, Western Foundry Co.
A. T. Richardson, Smith & Richardson Co.
Walter Daspit, Vulcan Iron Works
T. L. Arzt, T. L. Arzt Foundry Co.
Roy Kinder, Miehle Printing Press Co.
G. A. Lillieqvist, American Steel Foundries

CHICAGO CHAPTER CONVENTION COMMITTEE OFFICERS



C. E. Westover
Chairman

G. P. Phillips
Vice Chairman

L. L. Henkel
Secretary

C. C. Kawin
Treasurer

Advance Yourself and Your Industry Through Membership in American Foundrymen's Association

Annual Conventions

Foundry Shows

Chapter Meetings

Regional Conferences

Plant Visitations

IF YOU are engaged directly or indirectly in the manufacture, sale or design of foundry products, equipment or supplies, you owe it to yourself and your industry to become a member of the technical and educational organization which represents the entire foundry industry, the American Foundrymen's Association. Dispensing large amounts of useful information each year, A.F.A. offers you services and activities which will help you greatly in your work. Some of the benefits of membership in the American Foundrymen's Association are listed below.

Annual Conventions

Each year, A.F.A. sponsors Annual Foundrymen's Week. This week of convention activity has long been recognized as the most important gathering of foundrymen in the country, if not the world. Speakers of both national and international reputation bring you the latest developments and refinements in the production of cast iron, steel, malleable and non-ferrous castings. Each year, over 30 sessions, covering subjects of both general and specific interest, are sponsored by A.F.A. These activities are held for and are free to members.

Foundry Shows

On even numbered years, A.F.A. stages Foundry Shows concurrent with its Annual Conventions. Here you can see in operation all types of equipment and inspect materials, methods and processes applicable to castings manufacture. These Foundry Shows are held for and are free to members.

Chapter Meetings

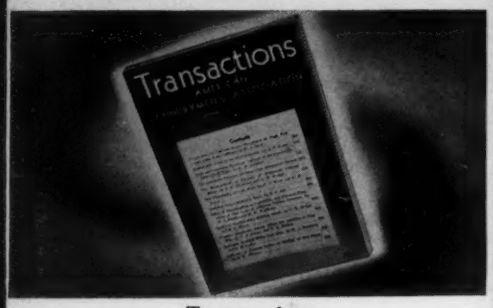
Since 1934, eighteen Chapters of A.F.A. have been organized in the larger foundry centers throughout the country. Each Chapter holds at least eight meetings annually. Leaders in foundry practice address these meetings. At Chapter meetings you become acquainted with men actively engaged in your own industry, who understand your problems and can talk your own language. Each Chapter has for its goal the advancement of the foundry industry in its locality. Chapter membership, if you reside in a territory where a Chapter exists, is included in the dues and is free to members.

Regional Conferences

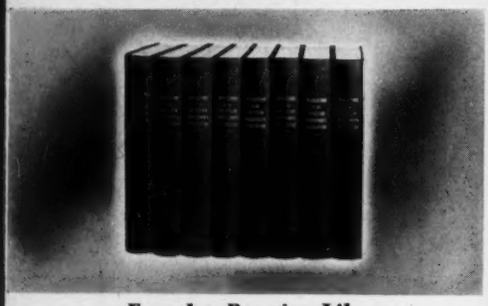
Regional Conferences, sponsored by Chapters and other foundry groups, in cooperation with the National Office, are held throughout the country in the interval between Annual Conventions. Often held in cooperation with engineering schools, these conferences serve at least three purposes. First, they offer an opportunity for the shop men of the district who have not attended the Annual Convention to gather, become acquainted, and hear the latest developments in foundry practices; secondly, they acquaint the instructors in engineering schools with the progress that is being made in cast materials; thirdly, they inform the embryo engineers of the possibilities of cast metals as engineering materials.

Plant Visitations

This phase of A.F.A. activities is especially valuable to the individual. It provides opportunity for inspection of many plants by members attending annual, chapter and regional meetings so that they may study, first hand, new and interesting plant operations. This phase of A.F.A. activity is included in the dues and is free to members.



Transactions



Foundry Practice Library

Cast Metals Handbook

American Foundryman

Sand Book

Preprints

Transactions

This quarterly publication is a reference book on foundry practice. Each issue contains papers and discussions presented at Annual Conventions, of interest to cast iron, malleable, steel and non-ferrous foundrymen. Each issue contains over 250 pages (over 1,000 pages per year). This publication is included in the dues and is free to members.

Foundry Practice Library

After each Annual Convention, all papers, discussions, research and committee reports, published to members in the Quarterly Transactions, are made available in bound form. These bound volumes constitute a library on foundry practices and investigations second to none in the world. Bound volumes are free to company members. Individual members are charged a small fee to defray the cost of printing and binding.

Cast Metals Handbook

Recognized as the international authority on cast materials, Cast Metals Handbook contains data on the chemical and mechanical properties of cast materials, useful to the designer of cast iron, malleable, steel and non-ferrous castings. This Handbook, now in its second edition, is prepared by committees composed of leaders in the foundry and allied fields. Cast Metals Handbook contains nearly 600 pages and is handsomely bound. It is revised periodically. Cast Metals Handbook is included in the dues and is free to members.

American Foundryman

Each issue of American Foundryman, a monthly publication, contains not only information on Association and Chapter activities but also articles of both general and specific interest to foundrymen in the various branches of the industry. In addition, it contains a section in which articles appearing in the leading foundry and technical journals throughout the world are abstracted. This publication is included in the dues and is free to members.

Sand Book

The "Sand Book," as the book "Standards and Tentative Standards of Testing and Grading Foundry Sands and Clays" is known, contains not only the standards indicated in the title, but also a list and description of the apparatus for performing the tests. It is recognized as the authority on this subject. Bound in imitation leather and containing nearly 200 pages, this publication is included in the dues and is free to members.

Preprints

Each year at the Annual Convention, some 40 papers on practical and technical foundry subjects are presented. These papers, whose authors are among the leading authorities in the foundry fields, deal with researches and investigations made in the non-ferrous, malleable, steel and cast iron divisions of the industry in both the operating and management branches. Many of these papers are printed prior to the Convention and are sent free to members on request to stimulate discussion and to make the convention sessions more interesting.

Chapters of the Americ

BIRMINGHAM
BUFFALO
CENTRAL INDIANA (Indianapolis)
CENTRAL NEW YORK (Syracuse)
CHICAGO
DETROIT
METROPOLITAN NEW YORK-NEW JERSEY (Newark)
METROPOLITA
PHILADELPHI
MICHIANA (South Bend, Ind
NORTHEASTERN (Cleveland)

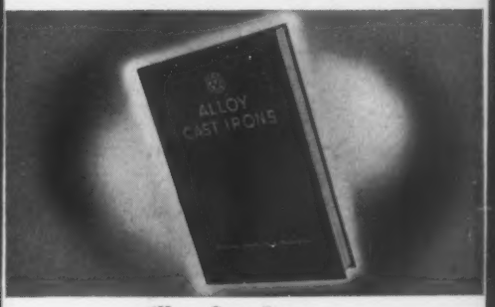
Committee Activity

It has been said that Committee Activity is the backbone of any Association. Over 400 A.F.A. members are serving on committees of the National Association and Chapters. These men realize the advantages of acquaintanceship with leaders in the foundry fields, of acquiring intimate knowledge of specific subjects in which they are interested, of the opportunity to demonstrate their ability, and of contributing to the advancement of the foundry industry. A.F.A. welcomes members to committee service.

Committee Activity

Alloy Cast Irons

This book, recognized as the leading authority on this subject, is a demonstration of the value of committee work. Compiled by the Gray Iron Division Committee on Alloy Cast Irons, this book contains in condensed, readily-available form, the present knowledge on alloy cast irons, including properties, specific applications and foundry practice. The book sells for $3.00. However, as with all A.F.A. publications, members may purchase this book at 50 per cent discount.



Alloy Cast Irons

Educational Courses

While the Annual Convention has been termed "A Short-Course in Foundry Practice," many Chapters of A.F.A. sponsor educational lecture courses in addition to regular Chapter meetings. These lecture courses are designed primarily for the men in the shop, apprentices and students and are fundamental in nature. What the Conventions and Chapter meetings are to the plant administrative forces, the lecture courses are to the workers.

Educational Courses

Microscope Book

The "Microscope Book," as the volume "The Microscope in Elementary Cast Iron Metallurgy" is called, is the result of a lecture course presented at the 1939 Convention. R. M. Allen, the author and conductor of the course, is a consulting metallurgist and a recognized authority. Material presented at these lecture courses will form the basis for a library on foundry subjects. The "Microscope Book" sells for $3.00 but members are entitled to a 50 per cent discount.

Microscope Book

Safety and Hygiene

A.F.A. maintains a Safety and Hygiene Department on which members may call for advice on medical, legal and insurance matters, including assistance in securing coverage at fair rates and improving practice to meet accident and compensation insurance requirements. It also publishes codes of recommended good practices for correction of occupational disease hazards and accident prevention. Thus far, five such codes, which have been widely adopted throughout the industry, have been produced and are available to members for a nominal fee.

Safety and Hygiene Codes

Friendship

What is life without friends! Especially friends with whom you can talk over the problems of your work. You cannot help but make useful friends through membership in A.F.A. by attending its meetings and comparing experiences with the men you meet there. So, membership in A.F.A., in addition to placing the most up to date information available in your hands, also provides the opportunity for you to acquire man's most valued asset—Friends.

Friendship

Foundrymen's Association

ORTHERN CALIF. (San Francisco)	ONTARIO (Toronto)	SOUTHERN CALIF. (Los Angeles)
THERN ILLINOIS-THERN WISCONSIN (Rockford, Ill.)	QUAD CITY (Davenport, Ia.; Moline, East Moline, Rock Island, Ill.)	WISCONSIN (Milwaukee)
	ST. LOUIS	*Sections*—CANADIAN

Application for Membership in the

American Foundrymen's Association

(Incorporated)

National Office • 222 West Adams Street, Chicago, Ill.

I hereby make application for { Company / Personal / Sustaining } membership in the American Foundrymen's Association and attach herewith $..... for one year's dues of which
(Make checks payable to American Foundrymen's Association.)

$4.00 is for one year's subscription to *Transactions American Foundrymen's Association* and $1.00 is for one year's subscription to *American Foundryman.*

● **Company Membership**.....**$25.00**
(Each plant of the same organization is considered as a separate company.)

● **Personal and Foreign Membership**.....**$15.00**
(This type of membership is for those NOT affiliated with company members and for those regularly established outside the United States and Canada.)

● **Personal Membership**.....**$8.00**
(If affiliated with company member.)

● **Sustaining Membership**.....*Minimum* **$50.00**
(For those who wish to aid the Association in proportion to the benefits derived.)

Signature of Applicant _____
(If company or sustaining membership, company name and signature of representative who will exercise voting privileges.)

_____

Title.....

Mailing Address.....

City..... State.....

Chapter Affiliation Desired.....
(Chapter membership is free to members.)

Invited to Membership by.....

Additional Information for A.F.A.

If elected to membership, I wish to receive the following publications gratis:

☐ Cast Metals Handbook

☐ Standards and Tentative Standards for Testing and Grading Foundry Sands and Clays

Preprints relating to (Please check those in which you are interested)

☐ Cast Iron Castings ☐ Non-Ferrous Castings ☐ Steel Castings ☐ Malleable Castings

Product or Service Sold or Made.....

CHICAGO CHAPTER CONVENTION COMMITTEES CHAIRMEN

A. W. Gregg
Publicity

L. H. Rudesill
Preview Day

James Suttie
Golf

H. W. Johnson
Hotel

W. A. Spuehler, Burnside Steel Foundry Co.
R. L. Vierling, Vierling Steel Works.
P. Williams, Manufacturers Brass Co.

Hotel Committee

Chairman, H. W. Johnson, Northwestern Foundry.
Secretary, Wm. J. Hennessy, Convention Bureau, Chicago Association of Commerce
E. A. Pridmore, International Molding Machine Co.
F. J. Riley, Liquid Carbonic Co.
C. B. Schneible, Claude B. Schneible Co.
R. P. Scully, Scully-Jones & Co.
N. V. Joyce, Swan-Finch Oil Corp.
A. S. Hindman, American Silica Sand Co.
N. H. Jacobsen, Western Material Co.
S. H. Bingham, Jr., Black Products Co.

Plant Visitation Committee

Chairman, J. J. Fox, Wisconsin Steel Co.
Co-Chairman, H. M. St. John, Crane Co.
Secretary, E. C. Reinmann, Wisconsin Steel Co.
A. L. Armantrout, Carnegie-Illinois Steel Co.
C. M. Evans, Chicago Steel Foundry Co.
H. A. Forsberg, Continental Roll & Steel Foundry Co.
Roy Frazier, Hansell-Elcock Co.
Roy Lindgren, Wisconsin Steel Co.
W. D. McMillan, International Harvester Co.
J. W. Porter, American Steel Foundries
F. B. Skeates, Link-Belt Co.
Hugo Slivinski, International Harvester Co.
J. C. Thomas, Whiting Corp.
C. L. Waggoner, Interlake Iron Corp.
L. J. Wise, Chicago Malleable Castings Co.

Transportation Committee

Chairman, H. Kenneth Briggs, Miller & Co.
F. E. Fisher, Sloss-Sheffield Steel & Iron Co.
John McBroom, Pittsburgh Lectromelt Furnace Corp.
H. E. Bodman, Berwind Fuel Co.
A. V. Magnuson, Champion Foundry & Machine Co.
A. H. Taylor, Chicago Retort & Fire Brick Co.
F. G. Faller, Jr., Corn Products Refining Co.
J. A. Obermaier, Illinois Testing Labs.
H. B. McKee, Materials Service Co.
R. A. Sullivan, Superior Flake Graphite Co.
H. Lindenberger, U. S. Reduction Co.
A. Warsaw, Wedron Silica Co.

Golf Committee

Chairman, James Suttie, American Steel Foundries
J. O. Houze, National Mall. & Steel Castings Co.
J. L. Pollock, Sivyer Steel Casting Co.
W. L. Hartley, Link-Belt Co.
D. E. Clifford, Hickman, Williams & Co.

Smoker Committee

Chairman, J. H. Abbott, Hickman, Williams & Co.
A. C. Behrendsen, F. E. Schundler & Co.
H. L. Charlson, American Steel Foundries
W. C. Packard, National Engineering Co.
R. S. Hammond, Whiting Corp.
W. E. Brewster, Wisconsin Steel Co.
Chas. Fahlstrom, American Manganese Steel Co.
H. A. Strain, Carnegie-Illinois Steel Co.
M. K. Wells, Chicago Foundry Co.
John Fienning, Chicago Hardware Foundry Co.

(Continued on Page 18)

CHICAGO CHAPTER CONVENTION COMMITTEES CHAIRMEN

H. K. Briggs
Transportation

P. V. Martin
Annual Dinner

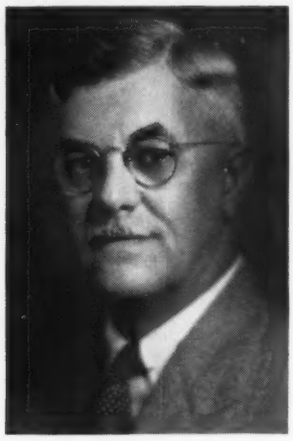
J. J. Fox
Plant Visitation

J. H. Abbott
Smoker

Chicago Convention Committee

(Continued)

R. D. Bartlett, Chicago Railway Equipment Co.
M. G. Sternberg, Continental Roll & Steel Fdry. Co.
J. J. Kanter, Crane Co.
R. D. Phelps, Jr., Francis & Nygren Foundry Co.
Peter Mate, Greenlee Foundry Co.
J. J. Boland, Griffin Wheel Co.
Ronald Webster, Hydro Blast Corp.
W. G. Cureton, W. A. Jones Foundry & Mach. Co.
F. A. Schneider, Kankakee Foundry Co.
George Messenger, Kensington Steel Co.
A. S. Nichols, Illinois Clay Products Co.
P. C. DeBruyne, Moline Malleable Iron Co.
F. A. Hagedorn, Interlake Iron Corp.
J. D. Pauly, Nichol-Straight Foundry Co.
W. L. Hartley, Link-Belt Co.
Frank Flynn, S. Obermayer Co.
S. Robinson, Pickands Mather & Co.
J. Johnson, Tarrant Foundry Co.
E. J. Cullinan, Western Foundry Co.
E. Kemerling, Woodruff & Edwards, Inc.
D. B. Reeder, Electro Metallurgical Co.
A. K. Sanderson, Love Bros., Inc.
C. O. Thieme, H. Kramer & Co.
E. R. Young, Climax Molybdenum Co.
W. B. George, R. Lavin & Sons
E. G. Grundstrom, Advance Alum. Castings Co.
W. C. Alvin, Imperial Brass Mfg. Co.
L. F. Johnson, Vanadium Corp. of America
Harry Evans, Allied Steel Castings Co.



James Thomson
General Chairman
Ladies' Entertainment

Ladies' Entertainment at Convention

THE Chicago Chapter, anticipating that a large number of ladies will accompany their husbands to the annual convention, has appointed a ladies' entertainment committee which has planned an extensive program of events for the ladies. Registration headquarters for the ladies will be at the Palmer House. The tentative program is as follows:

Monday, May 6

3:00 to 5:00 P. M. — Palmer House — Reception and Tea—Sponsored by A.F.A.

Tuesday, May 7

10:30 A. M. — Tour of the North Shore with luncheon at the Edgewater Beach Hotel.

6:30 P. M.—Dinner at Chicago Women's Club.

Wednesday, May 8

9:30 A. M.—Tour of South Shore Parkway, University of Chicago Campus and Museum of Science and Industry. Luncheon followed by visit to International House and Taft Fountain.

6:30 P. M.—Trip to Chinatown, dinner and visit to Hull House.

Thursday, May 9

1:00 P. M. — Luncheon at Field's with style show.

7:00 P. M.—A.F.A. Annual Dinner—Entertainment and dance sponsored by Chicago Chapter. Entertainment features modelled on Chicago Chapter Annual Ladies' Night.

The ladies' Committee is under the general chairmanship of James Thomson, Continental Roll and Steel Foundry Co. and past chairman of the Chicago Chapter. The personnel of the general committee and committees in charge of the various events is as follows:

Chairman, Mrs. C. E. Westover
Vice Chairmen, Mrs. Garnet P. Phillips
Mrs. L. J. Wise — Mrs. James Thomson
Mrs. L. H. Rudesill — Mrs. H. W. Johnson

A.F.A. Tea and Reception Committee

Chairman, Mrs. C. E. Hoyt
Honorary Chairmen, Mrs. H. S. Washburn and Mrs. L. N. Shannon

Mrs. H. S. Simpson	Mrs. T. S. Hammond
Mrs. W. R. Bean	Mrs. C. E. Westover
Mrs. G. P. Phillips	Mrs. H. W. Johnson
Mrs. L. H. Rudesill	Mrs. J. D. Burlie
Mrs. G. A. T. Long	Mrs. N. F. Hindle
Mrs. E. O. Jones	Mrs. R. E. Kennedy

OFFICERS, LADIES' ENTERTAINMENT COMMITTEE

Mrs. L. H. Rudesill
Vice Chairman

Mrs. G. P. Phillips
Vice Chairman

Mrs. C. E. Westover
Chairman

Mrs. James Thomson
Vice Chairman

Mrs. H. W. Johnson
Vice Chairman

North Shore Tour Committee

Chairman, Mrs. Max F. Becker
Mrs. P. V. Martin Mrs. C. R. Taylor
Mrs. Myron Tack Mrs. M. Goodrich
Mrs. W. C. Packard

Chicago Women's Club Dinner Committee

Chairman, Mrs. James Thomson
Co-Chairman, Mrs. B. J. Aamodt
Mrs. J. W. Porter Mrs. C. Fahlstrom
Mrs. H. S. Simpson Mrs. Harry Strain

South Shore Tour Committee

Chairman, Mrs. J. S. Townsend
Mrs. W. L. Hartley Mrs. R. M. Jones
Mrs. George Fisher Mrs. S. B. Robertson

Wednesday Dinner Committee

Chairman, Mrs. H. A. Forsberg
Co-Chairman, Mrs. W. H. Parker
Mrs. John Abbott Mrs. O. E. Peterson
Mrs. Martin Rintz Mrs. L. F. Hartwig

Beginning of North Shore Boulevard System, Chicago, One of the Tours, Ladies' Entertainment Program

Committee on Luncheon at Marshall Field & Co.

Chairman, Mrs. J. H. Owen
Mrs. G. B. Stantial Mrs. Henry Menke
Mrs. D. B. Clifford Mrs. J. C. Gore
Mrs. A. G. Gierach

CHAIRMEN AND MEMBERS, LADIES' ENTERTAINMENT COMMITTEES

Mrs. Max Becker
North Shore Tour

Mrs. J. S. Townsend
South Shore Tour

Mrs. J. H. Owen
Marshall Field Luncheon

Mrs. G. B. Stantial

Mrs. W. L. Hartley

St. Louis Group Discusses Melting Ferrous Metals

By J. W. Kelin*, St. Louis, Mo.

AN unusually large and interested group of chapter members and friends attended the March 14 meeting of the St. Louis District Chapter held at the York Hotel. The principal speaker of the evening was W. Harvey Payne, president, W. Harvey Payne & Co., Chicago, who gave a most welcome talk on "Melting Ferrous Metals." Illustrating his address with many interesting technical experiences, Mr. Payne presented a most comprehensive review of the subject and led the active discussion which followed.

The coffee talk was given by Major C. W. Bonham of the Field Artillery on the subject "New Streamlined Division."

*Federated Metals Div., American Smelting & Refining Co., and Secretary-Treasurer, St. Louis District Chapter.

Core Practices at Indianapolis

By R. A. Thompson*, Indianapolis, Indiana

THE evening of March 11, the Central Indiana Chapter held its regular monthly meeting at Hotel Washington, Indianapolis, with Chapter Chairman I. R. Wagner presiding. Some 150 members and guests turned out to hear L. P. Robinson of the Werner G. Smith Co., Cleveland, give his very interesting talk on "Variables in the Core Room." In his usual entertaining style, he handled the subject very ably and all those who attended gained much from the constructive presentation of core room problems and their solutions. Membership Chairman L. E. Davis reported on the very satisfactory progress the chapter was making.

*Electric Steel Castings Co. and Secretary, Central Indiana Chapter.

Brass Founding and Molding Machines

The Southern California Chapter held its March meeting on the 21st at the Elks Club, Huntington Park. Eighty members were present when Chapter Chairman A. G. Zima presented the two speakers of the evening. Wm. Romanoff of the H. Kramer Co. gave an unusually fine discussion on brass foundry practice, stressing many important phases in producing red brass, aluminum bronze, nickel, silver and other non-ferrous castings. Charles Jurack, Western Pattern Works, Los Angeles, talked on molding machines and accessories, pointing out the proper choice of molding machines for particular jobs. He also covered many points with reference to correct mounting of patterns for highest production and lowest costs.

REGIONAL CONFERENCES

Melting Methods to Feature Detroit Regional Conference

THE Eighth Annual Regional Foundry Conference of the Detroit Chapter held in cooperation with Michigan State College is to be devoted very largely to papers and discussions dealing with melting problems of steel, malleable, gray iron and nonferrous foundries. Series of very interesting papers are scheduled for the conference sessions which will be held Friday and Saturday, April 12 and 13, in the Engineering Building of Michigan State College at Lansing, Mich.

This annual regional conference is one of the oldest established regional conferences of its kind and has proved very popular over the years. While in the past the sessions have been devoted largely to the gray iron interests, this year all branches of the industry will be included, with well known authorities on melting practices presenting discussions on many phases of melting practice.

The Detroit Chapter and Michigan State College take great pleasure in extending a cordial invitation to all foundrymen and others interested in foundry practice to attend the conference and take part in the discussions of the papers which are shown in the program appearing below.

This year the committee on arrangements for the joint conference is under the chairmanship of F. A. Melmoth, Detroit Steel Castings Co. Serving with

Eighth Annual
Detroit Chapter Regional Conference
Held in Cooperation with Michigan State College

April 12-13, 1940 — **East Lansing, Michigan**

FRIDAY, APRIL 12

8:45 A. M.—Registration, R. E. Olds Hall.

9:30 A. M.—Opening Meeting.
Address of welcome, Dean Dirks, Engineering Dept., Michigan State College.

10:00 A. M.—Technical Meeting.
Chairman, V. A. Crosby, Climax Molybdenum Co., Detroit.

(a) "Developments in Melting of Gray Iron," by Don Reese, International Nickel Co.

Chairman, E. R. Darby, Federal-Mogul Corp.

(b) "Advancements in Non-Ferrous Melting," by G. K. Eggleston, Detroit Lubricator Co.

12:30-1:45 P. M.—Luncheon.
Speaker, Lieutenant Mulbar, Michigan State Police Dept., subject, "Lie Detection."

2:00 P. M.—Technical Meeting.
Chairman, F. A. Melmoth, Detroit Steel Casting Co.

(a) "Modern Steel Melting for Castings," by C. E. Sims, Battelle Memorial Institute, Columbus, Ohio.

Chairman, James Lansing, Malleable Iron Founders' Society.

(b) "Melting Requirements for Pearlitic Malleable," by Carl Joseph, Saginaw Malleable Division, General Motors Corp.

Chairman, R. G. McElwee, Vanadium Corp. of America, Detroit.

(c) "The Solidification of Cast Iron," by Dr. R. Schneidewind, University of Wisconsin.

7:00 P. M.—Banquet.

Toastmaster, W. Otto, Lansing Chamber of Commerce. *Speaker,* L. D. Barnhart, "Radio Personalities" Speech Dept., Michigan State College.

SATURDAY, APRIL 13

9:00 A. M.—Technical Meeting.

Chairman, Wayne Cockrell, Assistant Professor, Michigan State College.

(a) "Factors Affecting Shrinkage in Foundry Metals," by H. L. Womochel and C. C. Sigerfoos, Metallurgical Department, Michigan State College.

Chairman (b) and (c), Vaughn Reid, Detroit.

(b) "The Mechanical Properties of Castings as Affected by Mold Material," by Harry Dietert, Harry W. Dietert Co., Detroit.

(c) "The Effect of Mold Materials on the Physical Properties of Cast Aluminum," by H. Gould, Aluminum Corporation of America.

1:00-2:00 P. M.—Luncheon.

Del Monte, Calif., Industries Conference and Joint Meeting of A.F.A. California Chapters

him are Wayne L. Cockrell, Michigan State College; Carl F. Joseph, Saginaw Malleable Iron Div., General Motors Corp.; F. J. Walls, International Nickel Co.; Harry J. Deutsch, Aluminum Co. of America; O. E. Goudy, Kelsey-Hayes Wheel Co.; E. R. Darby, Federal Mogul Corp., and V. A. Crosby, Climax Molybdenum Co.

Birmingham Regional Conference Attracts Record Attendance

THE eighth regional foundry conference sponsored by the Birmingham District Chapter was not only a record breaker in attendance, with a registration of 700, but was one of the best arranged meetings, with a series of outstanding technical and management speakers. Held Thursday and Friday, February 22 and 23 at the Tutwiler Hotel, Birmingham, the high point of the conference was the annual banquet Friday evening. The attendance at the dinner had to be limited to 500, although some 100 additional reservations were sought. The speaker for the banquet was the Honorable Frank M. Dixon, Governor of Alabama. Taking as his subject "The Importance to the Nation of the Solution of the Economic Problems of the South," he stressed the industrial and agricultural problems, the development of the resources of Alabama and the progress that has been made in a most enlightening presentation. R. C. Harrell, Stockham Pipe Fittings Co., and Chairman of the Birmingham Chapter presented W. D. Moore, President, American Cast Iron Pipe Co. as toastmaster for the banquet. A feature of the dinner was the introduction of four (modern pioneers) of the Birmingham district men who had been signally recognized by the National Association of Manufacturers for important industrial contributions. These four were—J. N. Caruthers, Wallace Caldwell, James Doval and W. D. Moore.

With W. O. McMahon, Sloss-Sheffield Steel & Iron Co. and vice-chairman of the chapter, presiding at the Thursday luncheon, the speaker was the Vice-President of the American Foundrymen's Association, L. N. Shannon, Stockham Pipe Fittings Co. Mr. Shannon reviewed the history and activities of the Association, giving some interesting sidelights which are not generally known as to the scope of the work carried on by the A.F.A.

W. E. Curran, Republic Steel Corp., presided at the first technical session when the paper on "How Do You Sell Your Castings?" was presented by W. W. Rose, Executive Vice-President, Gray Iron Founders' Society, Cleveland. The address at the second session was given by Warren Whitney, National Cast Iron Pipe Co. Mr. Whitney's discussion on "Safety in the Foundry" gave an explanation as to how his company had established a two-year safety record with no lost-time accidents. The subject of "Off Grade Cast Iron" was discussed by V. A. Crosby, Climax Molybdenum Co., Detroit, at the third technical session on Thursday at which J. T. MacKenzie, American Cast Iron Pipe Co., presided.

Two technical sessions were held Friday afternoon, the chair-

Birmingham Conference — (Upper) Vice-President Shannon Addresses Luncheon Meeting. (Center Left) Karl Landgrebe Tells a Story. (Center Right) Governor Dixon. (Lower) Jim MacKenzie Presides at Session.

(Photos, Courtesy W. W. McCulloch, Acipco)

(Photos, Courtesy W. W. McCulloch, Acipco)

Shots of Birmingham Convention: (Above) Conference Banquet. (Center —left to right) Gordon Jones, U. S. Pipe Co.; Guy Bagley, Republic Steel Corp.; A. S. Holberg, Alabama Clay Products Co.; R. L. Ogden(Stockham Pipe Fittings Co. (Bottom—left to right) Frank Steinebach, Editor, The Foundry; L. N. Shannon, Vice-President, A.F.A. and Stockham Pipe Fittings Co.; W. O. McMahon, Sloss-Sheffield Steel & Iron Co., Chapter Chairman.

man of the first of these being G. E. Jones, U. S. Pipe and Foundry Co., Bessemer, and the speaker being H. J. Noble, American Cast Iron Pipe Co., discussing "Foundry Personnel Relations." The chairman at the second session was W. Lee Roueche, McWane Cast Iron Pipe Co., with the speaker, H. W. Dietert of Harry W. Dietert Co., presenting a paper on "How Does Sand Affect the Physical and Mechanical Properties of Castings?"

An entertainment feature of the conference was provided for Thursday evening, this being under the direction of a committee under the chairmanship of R. Lynn Ogden, Stockham Pipe Fittings Co. Friday morning was given over to plant visitation, a large number of foundries and coke and refractories companies opening their plants to visitors. The plant inspection trips were organized by a committee under the chairmanship of J. A. Woody, American Cast Iron Pipe Co.

Birmingham Conference — W. D. Moore, American Cast Iron Pipe Co., Toastmaster at Banquet (right) with Gov. Dixon of Alabama

Third Annual Wisconsin Regional Conference Most Successful

THE Wisconsin Chapter has again sponsored a most successful regional meeting, this being the Third Annual Foundry Conference in cooperation with the Department of Mining and Metallurgy of the College of Engineering, University of Wisconsin, was even more successful than last year's affair, the sponsors benefitting from previous experience. With over 370 registered, the sessions were run with clock-like precision, the meetings being held at the Hotel Schroeder, Milwaukee, February 15 and 16. Under the able direction of B. D. Claffey, General Malleable Corporation and vice president of the Wisconsin Chapter, and Prof. E. R. Shorey, University of Wisconsin, as joint chairmen of the committee, some 27 sessions and dinner and luncheon meetings were scheduled during the two days. Speakers for the general meetings, such as the annual dinner, luncheon and combined group talks, were—

C. A. Dykstra, President, University of Wisconsin.

Phil. S. Hanna, Editor, Chicago Journal of Commerce.

F. A. Kartak, Dean of College of Engineering, Marquette University.

J. C. Metcalfe, Former Special Agent, Dies Committee on Un-American Activities.

Voyta Wrabetz, Chairman, Wisconsin Industrial Commission.

F. Ellis Johnson, Dean of Engineering, University of Wisconsin, gave the address of welcome at the opening session. Mr. Hanna discussed "Present Day Affairs," Mr. Metcalfe, "Uncovering Un-Americanism," Dr. Dykstra, "Education and Business," and Mr. Wrabetz, "Pre-Employment Medical Examination." All these addresses will long be remembered by those hearing them.

Chapter President, W. J. MacNeill, presided at the annual dinner, the opening session and a general session. Mr. Claffey presided during the presentation of Mr. Wrabetz' address and Prof. Shorey presided during the presentation of Dr. Dykstra's address. The Waukesha Motor Company Glee Club entertained with some excellent songs during the conference dinner, and at this dinner and the luncheons Al Buettner, Milwaukee County Day School, assisted by J. F. Wesley at the piano, led the group in community singing.

Each morning and afternoon simultaneous sessions were held for discussion of technical and shop practice problems, these being divided into gray iron, steel, malleable and non-ferrous foundry groups.

Speakers for the non-ferrous sessions were: W. B. George, R. Lavin & Sons Co.; Wm. Romanoff, H. Kramer & Co.; M. E. Kohler, Scientific Cast Products Co.; H. W. Dietert, Harry W. Dietert Co., and W. E. Sicha, Aluminum Co. of America.

CHAPTER OFFICERS, SPEAKERS AND COMMITTEE GROUPS OF THIRD WISCONSIN REGIONAL CONFERENCE
(Photos, Courtesy John Bing, A. P. Green Fire Brick Co.)

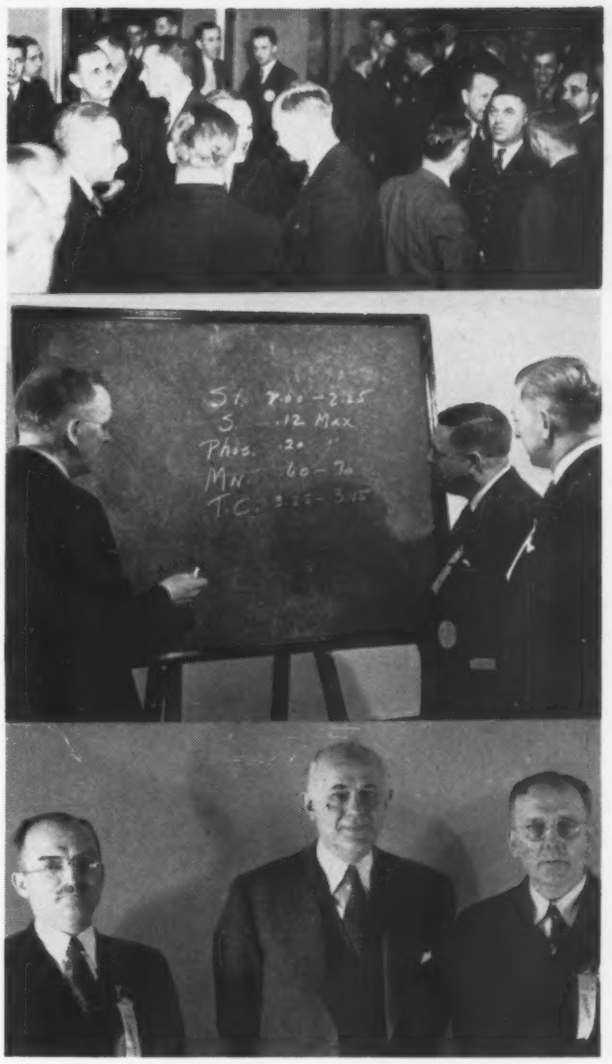
Speakers for the gray iron sessions were: B. P. Mulcahy, Citizens Gas & Coke Utility; John Tissing and E. J. Carmody, C. C. Kawin Co.; T. E. Barlow, Copper, Iron and Steel Development Association; C. V. Nass, Fairbanks Morse & Co., and Prof. P. C. Rosenthal, University of Wisconsin.

Speakers for the steel casting sessions were: R. C. Woodward, Bucyrus Erie Co.; H. L. Campbell, American Hoist & Derrick Co.; F. A. Pritzlaff, Falk Corp.; C. W. Briggs, Steel Founders' Society of America, and C. E. Sims, Battelle Memorial Institute.

Malleable sessions speakers were: J. H. Lansing and Prof. E. Touceda, Malleable Founders' Society; Dr. R. Schneidewind, University of Michigan, and Frank J. Faller, Jr., and A. J. Bulfer, Corn Products Refining Co.

Chairmen of the division program committees were: B. D. Claffey, gray iron; Prof. J. F. Oesterle, University of Wisconsin, malleable; C. E. Silver, Smith Steel Foundry Co., steel, and A. C. Ziebell, Universal Foundry Co., non-ferrous.

Lack of space prevents giving the names of the many others who contributed to the success of the conference by serving as chairmen of sessions and on the many conference committees. The Chapter and the Association wish to recognize these many men for the excellent work they did in organizing the details of the conference.



PERSONALITIES AT WISCONSIN REGIONAL CONFERENCE

(Top) Recess Between Convention Sessions. (Center) Prof. Shorey Demonstrates Problem for Chapter Chairman MacNeill and Vice Chairman Claffey. (Lower) President Dykstra, University of Wisconsin, with Profs. Oesterle and Shorey

(Photos, Courtesy John Bing, A. P. Green Fire Brick Co.)

National Officers Visit West Coast

FEBRUARY was significant in the activities of the Association, as a trip was made to the west coast by President Washburn and Executive Vice President C. E. Hoyt, accompanied by Donald J. Reese, International Nickel Co., New York, and Donald L. Cummings, University of Colorado. This was the first official visit of national officers to the west coast chapters.

On February 2 a meeting was staged at Denver, Colorado, with President Washburn discussing A.F.A. activities and Mr. Reese delivering a paper on cupola practice. The next stop was at Del Monte, Calif., where the two California chapters sponsored a joint meeting of foundrymen in connection with the 16th Annual Conference of the Iron, Steel and Allied Industries of California. President Washburn addressed the conference on foundry cost problems, Mr. Hoyt spoke on the A.F.A., while Don Reese discussed cupola practice and Mr. Cummings gave an address on foundry hygiene.

Messrs. Washburn, Hoyt and Reese then went on to San Francisco for the February 13 meeting of the Northern California Chapter and to Los Angeles for the February 15 meeting of the Southern California Chapter. Enthusiastic meetings, well attended, greeted these men from the east and middle west.

NATIONAL AND CHAPTER OFFICERS AT DEL MONTE CONFERENCE (Reading left to right) Sam Russell, Chairman, Northern California; C. E. Hoyt, Executive Vice-President, A.F.A.; Al Zima, Chairman, Southern California; Don Reese, International Nickel Co.; and H. S. Washburn, President, A.F.A.

CHAPTER DIRECTORY

Chicago Chapter

Meetings—2nd Monday, monthly, Medinah Club of Chicago.
Chairman—C. E. Westover, Burnside Steel Foundry Co.
Vice-Chairman—G. P. Phillips, International Harvester Co.
Secretary—L. L. Henkel, Interlake Iron Corp.
Treasurer—C. C. Kawin, C. C. Kawin Co.
Directors—J. D. Burlie, Western Electric Co.
W. H. Parker, American Steel Foundries.
J. J. Fox, Wisconsin Steel Co.
L. J. Wise, Chicago Malleable Castings Co.
H. Kenneth Briggs, Western Foundry Co.
H. W. Johnson, Greenlee Foundry Co.
A. W. Gregg, Whiting Corp.
W. C. Packard, National Engineering Co.
B. J. Aamodt, National Malleable & Steel Casting Co.
J. H. Abbott, Hickman, Williams & Co.
L. F. Lottier, Peoples Gas, Light & Coke Co.
L. H. Rudesill, Griffin Wheel Co.

Northeastern Ohio Chapter

Meetings—2nd Thursday, monthly, Cleveland Club, Cleveland.
Chairman—E. F. Hess, Ohio Injector Co., Wadsworth.
Vice-Chairman—F. Ray Fleig, Smith Facing & Supply Co.
Secretary—J. H. Tressler, Hickman, Williams & Co.
Treasurer—R. F. Lincoln, Osborn Mfg. Co.
Directors—Frank L. Barton, Fulton Foundry & Machine Co.
E. J. Hedlund, Urick Foundry Co., Erie, Pa.
D. J. McAvoy, Grabler Mfg. Co.
B. G. Parker, Youngstown Foundry & Machine Co., Youngstown.
Marcel Reymann, Atlantic Foundry Co., Akron.
L. P. Robinson, Werner G. Smith Co.
S. P. Schloss, Superior Foundry Co.
Frank G. Steinebach, "The Foundry."
F. A. Stewart, National Malleable & Steel Castings Co.

Quad City Chapter

Meetings—3rd Monday, monthly, rotate between Davenport, Iowa; Moline, East Moline and Rock Island, Ill.
Chairman—Herman Alex, Rock Island Arsenal, Rock Island, Ill.
Vice-Chairman—Nathan Lesser, Deere & Co., Moline, Ill.
Secretary-Treasurer—J. Morgan Johnson, Tri-City Manufacturers' Association, Moline, Ill.
Directors—M. J. Gregory, Caterpillar Tractor Co., Peoria
P. T. Bancroft, Moline.
L. W. Starner, Frank Foundries Corp., Moline
H. Bornstein, Deere & Co., Moline.
L. E. Roby, Jr., Peoria Malleable Castings Co., Peoria.
E. C. Wussow, Williams-White & Co., Moline.
Ray Wendland, International Harvester Co., Rock Island.
Frank W. Wells, J. I. Case Co., Rock Island.
Earl Snoddy, Blackhawk Foundry & Machine Co., Davenport, Iowa.

Detroit Chapter

Meetings—3rd Thursday, monthly, Fort Shelby Hotel, Detroit.
Chairman—Harry W. Dietert, Harry W. Dietert Co.
Vice-Chairman—J. H. Crawley, McKinnon Industries, Ltd., St. Catherines, Ont., Canada.
Secretary—H. J. Deutsch, Aluminum Co. of America.
Treasurer—Wm. W. Bowring, F. B. Stevens, Inc.
Directors—Ira F. Cheney, Griffin Wheel Co.
V. A. Crosby, Climax Molybdenum Co.
Howard McCoy, Cadillac Motor Car Co.
R. G. McElwee, Vanadium Corp.
A. L. Boegehold, General Motors Research Labs.
A. J. Conter, Chrysler Corp., Dodge Division.
R. B. Crawford, Atlas Foundry Co.
F. A. Melmoth, Detroit Steel Casting Co.
Fred Walls, International Nickel Co.
Glenn Coley, Detroit-Edison Co.
Otto E. Goudy, Kelsey-Hayes Wheel Co.
L. G. Korte, Riley Stoker Corp.
E. L. Morrison, Budd Wheel Co.

St. Louis District Chapter.

Meetings — 2nd Thursday, monthly, York Hotel, St. Louis.
Chairman—L. E. Everett, Key Co., East St. Louis, Ill.
Vice Chairman — W. Carter Bliss, Scullin Steel Co., St. Louis.
Secretary-Treasurer—J. W. Kelin, Federated Metals Div., American Smelting & Refining Co., St. Louis.
Directors—L. Desparois, Pickands, Mather & Co.
R. K. Durkan, M. W. Warren Coke Co.
G. S. Haley, Century Foundry Co.
George Mitsch, American Car & Foundry Co.
L. Reiber, Mt. Olive & Staunton Coal Co.
C. H. Morken, Carondelet Foundry Co.
L. C. Farquhar, American Steel Foundries, Granite City, Ill.
A. O. Nilles, Griffin Wheel Co., N. Kansas City.
Webb Kammerer, Midvale Mining & Mfg. Co.
L. J. Filstead, John C. Kupferle Foundry Co.
H. Sanders, American Foundry & Mfg. Co.
C. E. Rothweiler, Hickman, Williams & Co.

Metropolitan Philadelphia Chapter

Meetings—2nd Friday, monthly, Engineers' Club, Philadelphia.
Chairman—W. C. Hartmann, Bethlehem Steel Co., Bethlehem, Pa.
Vice-Chairman—R. J. Keeley, Ajax Metal Co., Philadelphia, Pa.
Secretary-Treasurer—W. B. Coleman, W. B. Coleman & Co., 1920 W. Indiana Ave., Philadelphia.
Directors—C. A. Bever, Bethlehem Steel Co., Bethlehem, Pa.
J. T. Fegley, North Bros. Mfg. Co.
L. W. Harris, Link-Belt Co.
H. Reitinger, U. S. Pipe & Foundry Co., Burlington, N. J.
John H. S. Spencer, H. W. Butterworth & Sons Co., Bethayres, Mont Co., Pa.
M. R. Taggart, Taggart & Co., Philadelphia, Pa.

Wisconsin Chapter

Meetings—3rd Friday, monthly, Schroeder Hotel, Milwaukee.
President—W. J. MacNeill, Federal Malleable Corp., West Allis.
Vice-President—B. D. Claffey, General Malleable Corp., Waukesha.
Secretary—A. C. Ziebell, Universal Foundry Co., Oshkosh.
Treasurer—M. J. Carpenter, Carpenter Brothers, Inc.
Directors—Roy M. Jacobs, Standard Brass Works.
Ray Flansburg, Belle City Malleable Iron Co., Racine.
Harry Donald, Interstate Supply & Equipment Co.
A. F. Genthe, Harnischfeger Corp.
Harry Ladwig, Allis-Chalmers Mfg. Co., West Allis
E. L. Roth, Motor Castings Co.
T. E. Ward, Badger Malleable & Mfg. Co.

Northern California Chapter

Meetings—2nd Friday, monthly.
Chairman — S. D. Russell, Phoenix Iron Works, Oakland
Vice Chairman—I. L. Johnson, Pacific Steel Castings Co., Berkeley.
Secretary-Treasurer—G. L. Kennard, Northern California Foundrymen's Institute, San Francisco.
Directors—J. K. Benedict, H. C. Donaldson Co., San Francisco.
Harold Martin, Vulcan Foundry Co., Oakland.
M. M. Morison, Balfour Guthrie & Co., Ltd., San Francisco.
M. G. Wilson, Wilson & Nutwell, Fresno.
J. D. Fenstermacher, Columbia Steel Co., San Francisco.
A. W. Allen, San Francisco Stove Works, San Francisco.
H. A. Bossi, H. C. Macaulay Foundry Co., Berkeley.
F. R. Geis, Metallurgical Laboratories, San Francisco.

Birmingham Chapter

Meetings—3rd Friday, monthly, Tutwiler Hotel, Birmingham.
Chairman—W. O. McMahon, Sloss-Sheffield Steel & Iron Co.
Secretary-Treasurer—J. A. Bowers, American Cast Iron Pipe Co.
Directors—W. E. Curran, Republic Steel Corp.
R. R. Deas, Jr., American Cast Iron Pipe Co.
C. B. Saunders, Tennessee Coal, Iron & R. R. Co.
A. S. Holberg, Alabama Clay Products Co.
H. A. Newbury, Newbury Mfg. Co., Talladega, Ala.

W. L. Roueche, Sr., McWane Cast Iron Pipe Co.
L. N. Shannon, Stockham Pipe Fittings Co.

Buffalo Chapter

Meetings—1st Monday, monthly.
Chairman—W. J. Corbett, Atlas Steel Casting Co.
Vice-Chairman—John McCallum, McCallum-Hatch Bronze Co.
Secretary—J. R. Wark, Queen City Sand & Supply Co.
Treasurer—R. K. Glass, Republic Steel Corp.
Directors—Alex Rankin, Lake Erie Engineering Corp.
Jos. Mayer, Lumen Bearing Co.
M. W. Pohlman, Pohlman Foundry Co.
W. S. Miller, C. C. Kawin Co.
R. T. Rycroft, Jewell Alloy & Malleable Co.
V. M. Mazurie, Buffalo Foundry & Machine Co.
J. P. Begley, Pratt & Lechtworth Co.

Southern California Chapter

Meetings—4th Thursday, monthly.
Chairman—A. G. Zima, International Nickel Co.
Vice-Chairman—Jas. E. Eppley, Kinney Iron Works.
Secretary—W. F. Haggman, Foundry Specialties Co., Huntington Park.
Treasurer—Charles R. Gregg, Reliance Regulator Corp., Alhambra.
Directors—R. J. Crichton, American Brake Shoe & Foundry Co.
Pasquale Arpea, Axelson Mfg. Co.
J. G. Eberhart, Kay-Brunner Steel Products, Inc.
Thomas J. McGraw, Jas. E. McGraw & Son, Brea.
J. E. Wilson, Climax Molybdenum Co.
Wm. Feltes, Westlectric Castings, Inc.
Silas R. Kimberly, Los Angeles Steel Casting Co.
D. E. Lingenfelter, Quality Foundry & Mfg. Co.
J. G. Coffman, Los Angeles Steel Casting Co.

Metropolitan New York-New Jersey Chapter

Meetings—1st Monday, monthly, Essex House, Newark, N. J.
Chairman—W. E. Day, Jr., Mack Mfg. Corp., New Brunswick, N. J.
Vice-Chairman—R. J. Allen, Worthington Pump & Machinery Co., Harrison, N. J.
Secretary—W. A. Phair, "The Iron Age," New York City.
Treasurer—Samuel Frankel, H. Kramer & Co., New York City.
Directors—George Hochgesang, American Brake Shoe & Foundry Co., Mahwah, N. J.
T. D. Parker, Climax Molybdenum Co., New York City.
D. J. Reese, International Nickel Co., New York City.
J. W. Reid, Robins Conveying Belt Co., Passaic, N. J.
Sam Tour, Lucius Pitkin, Inc., New York City.
R. E. Nesbitt, Pratt Institute, Brooklyn.
J. P. Nevin, Otis Elevator Co., Yonkers.
W. G. Reichert, American Brake Shoe & Foundry Co., Mahwah
T. J. Wood, American Brake Shoe & Foundry Co., Mahwah, N. J.

Northern Illinois-Southern Wisconsin Chapter

Meetings—2nd Tuesday, monthly, rotating between Rockford and Freeport, Ill., and Beloit, Wis.
Chairman—G. J. Landstrom, Sundstrand Machine Tool Co., Rockford.
Vice-Chairman—P. A. Paulson, Gunite Foundries Corp., Rockford.
Technical Secretary—H. C. Winte, Fairbanks Morse & Co., Beloit, Wis.
Secretary-Treasurer—G. K. Minert, Gunite Foundries Corp., Rockford.
Directors—August Christen, Arcade Mfg. Co., Freeport.
A. W. Wiegert, Geo. D. Roper Corp., Rockford.
W. L. Davey, W. L. Davey Pump Co., Rockford.
H. F. Halverson, Beloit Foundry Co., Beloit, Wis.
C. M. Dale, Liberty Foundries Co., Rockford.
Eli Johnson, Greenlee Bros. & Co., Rockford.
Harry J. Wade, Fairbanks Morse & Co., Beloit, Wis.
John T. Clausen, Greenlee Bros. & Co., Rockford.

Ontario Chapter

Meetings—3rd Friday, monthly.
Chairman—D. J. Macdonald, Dominion Radiator & Boiler Co., Ltd., Toronto.
Vice-Chairman—D. M. Storie, Fittings Ltd., Oshawa.
Secretary-Treasurer—S. R. Francis, Metals & Alloys, Ltd., Toronto.
Directors—Joseph Sully, Sully Brass Foundry, Toronto.
O. W. Ellis, Ontario Research Foundation, Toronto.
W. R. Barnes, W. R. Barnes & Co., Hamilton.
N. B. Clarke, F. B. Stevens, Inc., Toronto.
C. C. MacDonald, F. B. Stevens of Canada, Ltd., Toronto
J. J. McFadyen, Galt Malleable Iron Co., Galt.
John Thwaites, Beatty Bros. Ltd., Fergus.
J. W. Hall, Fahralloy, Ltd., Orilla.
John Reid, Canadian Westinghouse Co., Ltd. Hamilton.

Michiana Chapter

Meetings—Tuesday following 2nd Monday, monthly, Hotel Oliver, South Bend.
Chairman—A. C. Arbogast, Northern Indiana Brass Co., Elkhart.
Vice-Chairman—M. F. Doty, Clark Equipment Co., Buchanan, Mich.
Secretary-Treasurer—L. L. Andrus, American Foundry Equipment Co., Mishawaka.
Directors—W. A. Bachman, New York Central Railroad, Elkhart.
E. C. Bumke, Oliver Farm Equipment Co., South Bend.
A. H. Fries, Peru Foundry Co., Peru.
W. R. Gilmore, Superior Steel & Malleable Castings Co., Benton Harbor.
H. Klouman, Michiana Products Corp., Michigan City.
E. G. Mahin, University of Notre Dame, Notre Dame.
R. J. McSherry, Studebaker Corp., South Bend.
O. A. Pfaff, American Foundry Equipment Co., Mishawaka.
A. J. Rumely, LaPorte Foundry Co., LaPorte.
W. A. Schlosser, Argos Foundry Co., Plymouth.
George E. Stoll, Bendix Products Corp., South Bend.

Central New York Chapter

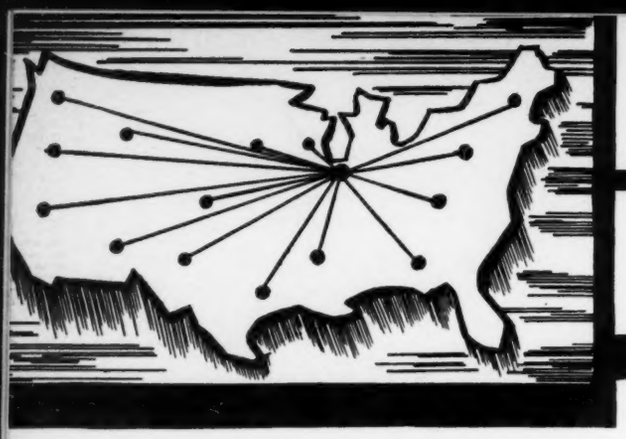
Meetings—2nd Friday, monthly, Hotel Onondaga, Syracuse.
Chairman—H. H. Judson, Goulds Pumps, Inc., Seneca Falls.
Vice-Chairman—Frank C. Wheeler, Kimman & Wheeler, Syracuse.
Secretary—L. D. Wright, U. S. Radiator Corp., Geneva.
Treasurer—E. J. Bair, Utica Radiator Corp., Utica.
Directors—A. C. Davis, Cornell University, Ithaca.
L. E. Hall, Syracuse Chilled Plow Co., Syracuse.
J. J. Jardine, Caldwell & Ward Brass Foundry, Syracuse.
J. L. Lonergan, Morris Machine Works, Baldwinsville.
G. M. Thrasher, R. Lavin & Sons, Elmira.
W. Jones, International Heater Co., Utica.
F. F. Shortsleeve, Elmira.
N. H. Boardman, Elmira Foundry Co., Elmira.
J. W. Barker, Andes Range & Furnace Corp., Geneva.

Cincinnati Chapter

Chairman—Herman K. Ewig, Cincinnati Milling Machine Co.
Vice Chairman—H. F. McFarlin, Lunkenheimer Co.
Secretary—E. T. Korten, Reliable Pattern & Castings Co.
Treasurer—Robert Frankl, Superior Pattern Co.
Directors—Earl H. Thompson, H. P. Deuscher Co., Hamilton.
E. F. Loges, Kramer Bros. Foundry, Dayton.
Chester Peebles, Stedman's Foundry & Machine Works, Aurora, Ind.
William Ball, Edna Brass Mfg. Co.
Ray Redmond, Buckeye Foundry Co.
Wm. Heilig, William Powell Co.

Central Indiana Chapter

Chairman—I. R. Wagner, Electric Steel Castings Co., Indianapolis.
Vice-Chairman—B. E. Gavin, National Malleable & Steel Castings Co., Indianapolis.
Treasurer—J. P. Lentz, International Harvester Co., Indianapolis.
Secretary—R. A. Thompson, Electric Steel Castings Co., Indianapolis.
Directors—R. L. McIlvaine, Swayne-Robinson Co., Richmond.
E. G. Schmidt, Jr., International Harvester Co., Indianapolis.
B. P. Mulcahy, Citizens' Gas & Coke Utility, Indianapolis.
L. M. McAnly, Rockwood Mfg. Co. Indianapolis.
M. B. Falvey, Hoosier Iron Works, Kokomo.
L. E. Davis, Republic Coal & Coke Co., Terre Haute.
S. A. Norrick, Perfect Circle Co., New Castle.
S. C. Wasson, National Malleable & Steel Co., Indianapolis.
H. B. Harvey, Indiana Foundry Corp., Muncie.
C. M. Hardy, Hougland & Hardy, Inc., Evansville.



Chapter Activities

New York-New Jersey Chapter Studies Safety Codes

By B. K. Price*, New York, N. Y.

THE revised safety code of the A.F.A. will probably be available for distribution around April 1, according to James R. Allan, International Harvester Co., Chicago, and chairman of the committeee on industrial hygiene codes of the Association, who spoke at a meeting of the Metropolitan New York - New Jersey Chapter, Monday evening, March 4, at the Essex House, Newark, N. J. This was revealed by Mr. Allan in a discussion of dust control and safety problems, in which he outlined various features of the proposed code and also presented a preview of the tentative regulations for the state of New York which will be up shortly for public hearing.

The proposed New York regulations will comprise, in fact, two codes, one having to do with safety and the other with occupational diseases. As a member of the committee on this latter phase, Mr. Allan devoted his comments on the New York regulations chiefly to rules relating to occupational diseases. He believed that, with few exceptions, which might later be remedied, the code—in fact, both codes—will prove generally fair and beneficial.

Henry S. Washburn, Plainville Casting Co., Plainville, Conn., and president of the A.F.A., served as technical chairman. He introduced an unscheduled speaker from his own state, A. S. Gray, director, bureau of occupational diseases, Connecticut State Department of Health, Hartford, who spoke briefly on regulations in his state and who emphasized the vast amount of good that can be accomplished in health and safety by close attention to the principles of good housekeeping—and all, he added, without a cent of additional cost. He said that while Connecticut has not a safety foundry code, as such, it nevertheless has a set of industrial regulations which have proved helpful.

He remarked particularly upon the flexibility of these regulations with changes possible within a month. So often, he pointed out, impractical features once they are included in a code take too long to eliminate. That was one difficulty, he said, that did not confront industry in Connecticut. He indicated that eventually Connecticut would have a special code for foundrymen, but that it had been moving slowly until it could observe more carefully the work under way in some nearby states, New York in particular.

Coffee speaker was R. J. Untreiner, special agent in charge of the Newark office of the Federal Bureau of Investigation, who commented particularly on the training of F.B.I. men.

*Penton Publishing Co.

Buffalo Chapter Considers Foundry Supplies

By Henry F. Sproull,* Buffalo, N. Y.

THE March 1 meeting of the Buffalo Chapter was held at the Hotel Touraine, Buffalo, with W. J. Corbett, chapter chairman, presiding. Seventy-four were present for the dinner with others coming in for the business meeting which followed.

A new committee was announced on Radiographing and Examination of Castings, with T. H. Burke of the Otis Elevator Co. as chairman. The work of this committee will be of considerable interest and value to the chapter. Our Special Features Department presents a colored film, of some length, on the "Physics of Metal Cutting" shown through the courtesy of the Cincinnati Milling Machine and Cincinnati Grinders, Inc. An accompanying paper, giving important points in connection with the picture, was read by R. K. Glass of the Republic Steel Corp. Together they presented a very clear picture of what happens to metals at the cutting edge of the tool.

Instead of a principal speaker of the evening a novel arrangement was worked out whereby it was possible to cover technical information on several subjects of interest to the chapter. It was necessary to limit the time allotted each speaker, in order to cover the various subjects. However, sufficient time was permitted for each speaker to cover the main points of his subject. The following subjects were presented.

Molding and Core Sands—by V. L. Whitehead, Whitehead Bros. Co.

Fire Clay—by R. L. Cleland,

*A. P. Green Fire Brick Co. and Acting Secretary, Buffalo Chapter.

Jr., Eastern Clay Products Co.
Firestone — by J. R. Turner, Queen City Sand & Supply Co.
Seacoal—by Dr. J. A. Ridderhof, Frederic B. Stevens, Inc.
Chaplets—by S. A. LeViness, Combined Supply & Equipment Co.

Scrap Problems Discussed by Barringer at New England Meeting

By M. A. Hosmer*, Boston, Mass.

THE New England Foundrymen's Association at its February meeting was favored with an interesting discussion of foundry scrap problems by E. C. Barringer, executive secretary, Institute of Scrap Iron and Steel. Francis Le Baron, president of the N.E.F.A., presided at the meeting held at the Engineers' Club, Boston. Mr. Barringer stated that scrap originates in the home, farm, factory, utility, railroad and steamship companies and many other places. The average life of steel is considered to be 33 to 35 years and although it may be much longer before some types, such as structural steel for buildings, come back into industry, tin cans, automobiles, etc., have a much shorter life. In discussing automobiles, the speaker pointed out that there is an average of 2100 lbs. of ferrous materials obtained from each car junked and that 2,500,000 autos passed on last year. It is also interesting to learn that 80 per cent of the steel used in the manufacturing of automobiles is returnable as scrap, thereby reducing the drain on this country's natural resources.

Of the scrap that is recovered and sold in this country, about 70 per cent goes into open hearth plants, 20 per cent into foundries and the remaining 10 per cent into miscellaneous industries. In 1938 there were 4,200,000 tons of scrap used by foundries. Scrap is used because it is cheaper and more readily attainable than iron obtained from pig. The scrap industry is now regarded in many states as a manufacturing industry which benefits the latter as far as taxes are concerned.

One interesting angle brought out by Mr. Barringer was that the maximum pig iron obtainable in this country per year at the present time was 50,000,000 tons and the amount of steel ingots that could be provided in a peak year of steel production was 73,000,000 tons, so that it is imperative to have a source of supply in scrap to make up the difference, if this condition should arise.

In regard to the exporting of scrap, which is of so much interest at the present time, the speaker said that the amount of material exported is small in comparison to the amount produced, probably not more than 10 per cent. In 1939, there were 39,000,000 tons used at home and 3,500,000 tons exported. Also 70 per cent of scrap exported is of an inferior material, such as No. 2 bundles, which consist of plate, barrels, auto bodies, etc., compressed into bundles the size of an orange crate and weighing 700 lbs. This type of scrap is becoming more and more popular. In conclusion, he said that there was plenty of available scrap and the amount required for export is negligible.

*Hunt-Spiller Mfg. Co.

Twin City Foundrymen's Association Reports Two Meetings

By O. W. Potter,* Minneapolis, Minn.

THE Twin City Foundrymen's Association had their January meeting at the Dunwoody Industrial Institute in Minneapolis. F. G. Musala, state director of apprenticeship gave a brief summary of the new apprenticeship law enacted by the last state legislature. Dr. C. A. Prosser, director of the Dunwoody Industrial Institute, then gave a very interesting talk on the subject "Dunwoody's Program." This was followed by a tour through the school where evening classes were in session.

The March meeting was held Monday, March 4, 1940, at the North Central Commercial Club in St. Paul. A steak dinner was served at 6:30 P.M. There were 49 present representing 19 foundries. H. H. Blosjo, Minneapolis Electric Steel Castings Co. and president of the association introduced the speaker of the evening, E. H. Comstock, dean of the School of Mines, University of Minnesota, who gave his famous lecture on "Wildcats and Doodlebugs." Prof. Comstock gave a brief history of some of the best known "Wildcats" in

*University of Minnesota and Secretary, Twin City Foundrymen's Association.

Cincinnati District Chapter Entertains Ladies with Christmas Party

this part of the country. He had a trunk full of "Doodlebugs" which he operated and described. This was not strictly a foundry topic but Prof. Comstock warned the foundrymen that they looked just as much like "suckers" as other groups he had talked to.

Engineering a Foundry

A VIVID word picture of the engineering and economics involved in selecting a location and determining layout and design for a new foundry project was given by H. W. Maxon to members of the Chicago Chapter at its meeting on March 12. With C. E. Westover, chapter chairman, presiding during the dinner meeting, Mr. Maxon was introduced by Vice Chairman G. P. Phillips.

Mr. Maxon, assistant manager, industrial engineering and construction department, International Harvester Co., took as the subject of his talk "Foundry Planning and Engineering," using as a definite example the problems connected with the I.H.C. foundry at Indianapolis. He stated that two major questions were—why a new plant and why located at Indianapolis? The need for a new plant was based on future requirements; the location at Indianapolis was determined for it offered a central location to other I.H.C. plants, available raw materials, good highway connections for trucking, a city offering sufficient labor and a city which, because it had been a center of automotive manufacturers, could supply men familiar with the type of work needed in this plant. After deciding on the city, the selection of the site for the plant was an engineering problem, considering extent of land needed for present and future expansion, railway and highway accessibility and housing. A plot of 75 acres was acquired just outside the city limits.

The management then gave a production schedule and the motor plant, including the foundry, was designed on this basis. The original schedule of 300 tons a day for the foundry being kept in mind, a possible production of 600 tons a day was considered the ultimate. The layout of the material yard, flow of material to and through the foundry were carefully worked out. The foundry was designed for mechanical handling and continuous conveyor systems, with the latest and most efficient equipment being installed. Mr. Maxon went into a detailed description of the equipment and layout, with a very clear description of the many problems involved and the decisions reached. Following the completion of the talk, questions were asked with the speaker clearing up these points. It was announced that at the annual A.F.A. convention in May a paper would be given illustrated with slides showing the equipment at this plant.

Following the dinner a report of the chapter nominations was presented. Nominations announced were for:

Chairman, G. P. Phillips, International Harvester Co.; *vice chairman,* L. L. Henkel, Interlake Iron Corp.; *secretary,* B. L. Simpson, National Engineering Co.; *treasurer,* C. C. Kawin, C. C. Kawin Co. *Directors:* C. E. Westover, Burnside Steel Foundry Co.; T. J. Magnuson, J. S. McCormick Co. and H. A. Forsberg, Continental Roll & Steel Foundry Co.

Hoenicke Describes Manufacture of Permanent Mold Castings

DISPLAYING about one hundred castings made by the permanent mold machine, which produces as many as 10,000 castings of one type in a day, E. C. Hoenicke, Eaton-Erb Foundry Co., Vassar, Mich., delivered an extremely interesting talk to the Baltimore Section of the Society of Automotive Engineers, on February 8, 1940. Foundrymen of the district were invited to attend and many were present.

Design and handling of the machine, the principle of which is well known in foundry practice, was described in detail, as were many of the problems met in preparing molds for special patterns. Application of the castings covered a surprisingly wide field, including many parts used in automotive fleets and many used in the average home.

When questioned relative to the material used in the preparation of molds, Mr. Hoenicke replied that when the ideal material for brake drums was developed, one that would not heat check and crack with continued brake applications, that metal would be ideal for molds since the service was identical in principle.

Discussing the success that his company had met in production of small but complicated castings, the absence of cracks and the perfect uniformity of metal throughout the section were emphasized. Mr. Hoenicke's impartiality to the principles of foundry practice was emphasized by him in that his company operated a sand plant as well as the machines.

Collier Talks to Quad City Chapter

By J. Morgan Johnson*, Moline, Ill.

THE Quad City Chapter held its February meeting on the 19th at the Fort Armstrong Hotel, Rock Island. Herman Alex, Rock Island Arsenal and chapter chairman, presided. The speaker of the evening was R. L. Collier, secretary, Steel Founders' Society of America, Cleveland, O. Chairman Alex introduced Art Reading, Zimmerman Steel Casting Co., who in turn introduced Mr. Collier to the 150 present.

Mr. Collier talked on "Steel

*Tri-City Manufacturers Association and Secretary - Treasurer, Quad City Chapter, A.F.A.

Castings, the Sinews of the Industry," and gave a very interesting discussion as to the various fields of use of the steel casting. His talk was illustrated by slides of the various types of castings made, with interesting data as to the properties, design and heat treatment of the steel castings. Many illustrations were also given in regard to castings of one piece type as compared to assembly jobs, and these were compared as to cost of manufacture by fabricating. Many problems that were presented in the manufacture of steel castings are so complex that there is and should be close cooperation between engineers, pattern shop and foundry proper.

Central New York Holds Double Meeting

By L. D. Wright*, Geneva, N. Y.

THE Central New York Chapter at its March 8 meeting continued the plan inaugurated in February of holding two technical sessions following the chapter dinner, one being for the gray iron group and one for the non-ferrous group. The March meeting was held at Hotel Onondaga, Syracuse, with chapter chairman H. H. Judson presiding at the dinner. George Evans Mathieson Alkali Works, New York City, gave the paper for the gray iron group, discussing cupola design and operation. Joseph Nixon, Whitehead Metal Products Co., New York City, spoke before the non-ferrous group, explaining the production of bronze castings.

In discussing the sand bottom, the lighting of the bed, the order of charging, fluxes, coke, and the cupola blast, Mr. Evans gave those present a lot of food for thought. He stated that "It is an undisputable axiom that the start determines the character of the heat—a bad start such as comes with a poorly lighted or an overburned bed will often exert its effect over several hours' melting time." This subject was further expanded by referring to the different methods of lighting the bed. Mr. Evans expressed the opinion that soaking the cupola is obsolete and that, the longer the soaking period, the greater the chance for variations and for wider variations in the character of the iron.

Mr. Nixon described the various phases in the production of bronze castings and the care each operation requires to produce sound castings. He demonstrated on a series of very clear and instructive lantern slides the results of poor molding, core making, gating, risering, and melting, and explained in each case how the defects were overcome by proper foundry methods.

*Supt., Geneva Plant, U. S. Radiator Corp., and Secretary, Central New York Chapter.

Plant Engineering and Maintenance at Michiana

By L. L. Andrus*, Mishawaka, Ind.

JAMES Thomson, chief engineer, Continental Roll & Steel Foundry Co., East Chicago, Ind., was the technical speaker before the March 12 meeting of the Michiana Chapter. Some 80 members were present at dinner held at the Hotel Oliver, South Bend, Ind., despite icy roads making traveling hazardous. Mr. Thomson who is chairman of the A.F.A. committee on plant and plant equipment, spoke on plant engineering and maintenance. He discussed the problems of organizing maintenance departments in large foundries and the type of arrangements which should be made by smaller foundries to obtain corresponding service by pooling their interests. His talk also covered the proper keeping of records in connection with all equipment, the classification and retirement periods for equipment.

Preliminary to the technical section of the meeting, R. J. McSherry, Studebaker Corp., and chairman of the chapter nominating committee, presented a report nominating the following officers and directors for election at the April meeting:

To serve as *chairman*, M. F. Doty, Clark Equipment Co., Buchanan, Mich.; *vice-chairman*, E. C. Bumke, Oliver Farm Equipment Co., South Bend, Ind.; *secretary-treasurer*, L. L. Andrus, American Foundry Equipment Co., Mishawaka, Ind.; *directors*, R. E. Patterson, Elkhart Foundry & Machine Co., Elkhart, J. E. Drain, Oliver Farm Equipment Co., South Bend, S. W. Howard, Weil-McLain Co., Michigan City, and F. T. McGuire, Notre Dame University, South Bend.

*American Foundry Equipment Co., and Secretary-Treasurer, Michiana Chapter.

Dinner Groups at First Annual Christmas Party of Cincinnati Chapter

Seattle Washington Foundry Meeting Hears Don Reese on Cupola Practice

A VERY enthusiastic group of foundrymen from the Seattle district attended a meeting held at the Frye Hotel, Seattle, the evening of March 1. The meeting was arranged by some members of the American Foundrymen's Association under the leadership of William Anderson, Eagle Brass Foundry Co. and Edwin C. Gustin, with the cooperation of G. S. Schaller, in order that foundrymen of the district would have an opportunity to hear Donald J. Reese, a nationally famous authority on cupola melting. Mr. Reese, connected with the International Nickel Co., had been on a trip to the west coast, speaking before meetings of the California Chapters of A.F.A.

Accompanying Mr. Reese to Seattle, Charles J. P. Hoehn, Enterprise Foundry Co., San Francisco, gave a short address as a national director of the American Foundrymen's Association. Some 42 foundrymen were present, some traveling 150 miles to attend and hear the extremely interesting talk on cupola practice by Mr. Reese.

Processing Cast Metals Meeting

By J. T. Fegley*, Philadelphia

THE regular monthly meeting of the Metropolitan Philadelphia Chapter was held at the Engineers Club on Friday, March 8. With 100 for dinner, Dr. Arthur C. James gave a most interesting talk with motion pictures in color of his journey through the Scandinavian countries during the past summer. R. A. Gezelius, the technical chairman, introduced R. G. McElwee, Metallurgist of the Vanadium Corporation of America, who spoke on "Processing of Cast Ferrous Materisla."
Cast Ferrous Materials."

Mr. McElwee called attention to the fact that practically every element used in the manufacture of cast iron has at least two effects and that our common laboratory methods measure the sum or difference of these effects. The next point which was developed was the time consumed in the melting operation by different types of melting equipment and touched upon the effect of this variation in time. The next point was a review of the fact that foundrymen have always experienced a wide variation of structure accompanying varying melting conditions even when routine chemistry is constant. A new approach to this problem was discussed in which a treatment was proposed using materials which have affinity for gases but which do not graphitize. Slides were shown illustrating that chill can be reduced by 50 per cent at the same time that hardness is increased by 20-30 points Brinell. Mr. McElwee was at his best and handled the discussion that followed his talk to the entire satisfaction of those present. It was a worthwhile meeting.

*North Bros. Mfg. Co. and Chairman, Publicity Committee, Metropolitan Philadelphia Chapter.

Cincinnati Chapter Hears Talk on Health and Safety

THE March meeting of the Cincinnati District Chapter was held at the Gateway Restaurant, March 12. Chapter chairman, Herman Ewig, Cincinnati Milling Machine Co., presided at the dinner with about 60 members present. About 40 members came in after the dinner for the meeting. As a novelty, while the coffee was being served at the dinner, a couple of strolling musicians appeared on the scene and led the group in popular old and new songs.

Chairman Ewig introduced the first speaker, Dr. Otto P. Geier, personnel director of the Cincinnati Milling Machine Co., whose subject, "Some Phases of Medicine in Industry," was very timely. The doctor told of his experiences abroad and in this country as a member of various committees on some phase of labor relations and stressed the need of responsible heads of organizations lending their efforts and assistance to a betterment of conditions in their plants, both as to safety and hygiene and labor relations. He called attention to the fact that it was his experience that this country was far ahead of the foreign countries he visited, in this field.

Chairman Ewig then introduced Peter E. Rentschler, president of the Hamilton Foundry & Machine Co., Hamilton, O., who chose as his subject "A Practical Approach to Safety and Hygiene in a Foundry." As head of the movement in his plant, Mr. Rentschler was able to give a very clear picture of the situation and the savings he was able to effect in his Industrial Commission rates through a lessening of his accident rate. Some excellent plant movies were an effective aid to Mr. Rentschler in his talk. The meeting was one of the best of the year with favorable comment from all.

Northern Illinois-Southern Wisconsin Meeting on Safety

By H. C. Winte*, Beloit, Wis.

THE March 11 meeting of the Northern Illinois-Southern Wisconsin Chapter of the A.F.A. was held at the Hotel Faust, Rockford, Ill. Chapter Chairman G. J. Landstrom, Sundstrand Machine Tool Co., presided, with some 50 members and guests present. H. W. Lundin, Liberty Mutual Insurance Co., gave an interesting paper on "Safety in the Foundry." Each department in the foundry was discussed as to the hazards involved. Remedies and precautions for safe practice were described. Information was given on how safe conditions affected production costs and insurance rates. Mr. Lundin's talk was illustrated with pictures contrasting safe and unsafe foundry practices.

*Fairbanks Morse & Co. and Technical Secretary, Northern Illinois-Southern Wisconsin Chapter.

NEW MEMBERS

Birmingham Chapter

Alden W. Peterson, The Barrett Company, Birmingham, Ala.

Central Indiana Chapter

Stanley G. Disque, Asst. Dist. Sales Mgr., Republic Steel Corp., Indianapolis, Ind.

McQuay-Norris Manufacturing Co., Connersville, Ind. (R. E. Gage, Fdry. Supt.)*

Robert Spurgin III, Engineering Dept., Swayne-Robinson & Co., Richmond, Ind.

Central New York Chapter

Rollin A. Snider, Salesman, Pickands, Mather & Co., Erie, Penna.

I. F. Vergamini, Goulds Pumps, Inc., Seneca Falls, New York

Chicago Chapter

L. S. Cohen & Co., Chicago, Ill. (Harold Berger, Sales Rep.)*

David B. Hill, Chicago, Ill., Sales Engineer—Chain Belt Co., Milwaukee, Wis.

W. B. Libert, Metallurgist, Continental Roll & Steel Foundry Co., East Chicago, Ind.

Cincinnati Chapter

James R. Morrissey, Salesman, Semet-Solvay Co., Cincinnati, Ohio

Detroit Chapter

Ann Arbor Foundry Co., Ann Arbor, Mich. (Thomas Cook, President)*

Bostick Foundry Co., Lapeer, Mich. (E. T. White, Secretary)*

Charles M. Brown, Asst. Fdry. Foreman, U. S. Radiator Corp., Detroit, Mich.

Charles A. Bultman, Detroit, Mich., District Mgr., Pangborn Corp., Hagerstown, Maryland

B. F. Emrick, Plant Supt., U. S. Radiator Co., Detroit, Mich.

O. L. Johnson, Foundry Supt., U. S. Radiator Corp., Detroit, Mich.

Herman Reinhold, Supt. Pattern Division, Ford Motor Company, Dearborn, Mich.

L. W. Unger, Detroit, Mich., Dist. Sales Eng., —Pangborn Corp., Hagerstown, Maryland

Metropolitan New York Chapter

G. E. Hadzima, Foundry Engineer, Robins Conveying Belt Co., Passaic, N. J.

W. F. Jones, New York City, District Mgr., Pangborn Corp., Hagerstown, Maryland

W. C. Kruse, Jr., Representative, American Air Filter Co., Inc., Newark, N. J.

Penn-Rillton Company, New York, N. Y. (Henry C. Seidel, Sales Engineer)*

Robins Conveying Co., Passaic, N. J. (J. W. Reid, Vice-President)*

Michiana Chapter

Guy Bailey, Foundry Supt., Northern Indiana Brass Co., Elkhart, Ind.

William King, Melting Foreman, Northern Indiana Brass Co., Elkhart, Ind.

Ray Newcomer, Cleaning Room Foreman, Northern Indiana Brass Co., Elkhart, Ind.

Wade Stine, Core Room Foreman, Northern Indiana Brass Co., Elkhart, Ind.

Northeastern Ohio Chapter

William T. Hughes, Cleveland, Ohio, Sales Repr., Berwind Fuel Co., Chicago, Ill.

Edwin J. Jory, Student, Case School of Applied Science, Cleveland, Ohio

Northern California Chapter

Henry Bausch, Molder, Enterprise Foundry Company, San Francisco, Calif.

John D. Darrah, Core Room Foreman, Enterprise Foundry Company, San Francisco, Calif.

James Graham, Foreman Iron Foundry, James Graham Manufacturing Co., Newark, Calif.

Harry J. Hoehn, Jr., Costs, Asst. Supt., Enterprise Foundry Co., San Francisco, Calif.

Aldo Ricetti, Molder, Enterprise Foundry Company, San Francisco, Calif.

University of California Library, Berkeley, Calif., Harold L. Leupp, Librarian

Nate Weinger, Supt., Iron Foundry, Enterprise Foundry Co., San Francisco, Calif.

Ontario Chapter

Carl R. Whittemore, Research Met., Deloro Smelting & Refining Co., Ltd., Deloro, Ont., Canada.

Quad City Chapter

The Moline Public Library, Moline, Ill., Alice Williams, Librarian

Chas. Stoneburg, Supervisor, International Harvester Co. (The Foundry), Rock Island, Ill.

Southern California Chapter

F. L. Ditty, Mgr., Pacific Coast Division, Federal Foundry Supply Co., Los Angeles, Calif.

D. C. Murray, Mgr., Industrial Materials, Ltd., Los Angeles, Calif.

A. H. Popperwell, Vice-President, Reliable Iron Foundry, Los Angeles, Calif.

Wisconsin Chapter

R. A. Smith, Sales Dept., Sterling Wheelbarrow Company, Milwaukee, Wis.

Outside of Chapters

Acme Foundry & Machine Co., Blackwell, Okla. (E. C. Graham, Manager)*

Atlas Foundry & Machine Co., Tacoma, Wash. (Leo H. Long, Supt.)*

Crucible Furnace Company, Charlottesville, Virginia (Chas. M. Walker, President)*

Frank M. Hartford, International Allied Engineering, S.P.L., Buenos Aires, Argentina, S. A.

Ralph O. Janson, Chemist, Defiance Machine Works, Inc., Defiance, Ohio

E. Scott, General Manager, Kalgoorlie Foundry, Ltd., Kalgoorlie, W. Australia

Westinghouse Electric & Mfg. Co., East Springfield Works, Springfield, Mass. (F. R. Elliott, Supt. of Foundry*

*Company Members

ABSTRACTS

NOTE: The following references to articles dealing with the many phases of the foundry industry, have been prepared by the staff of *American Foundryman*, from current technical and trade publications.

When copies of the complete articles are desired, photostat copies may be obtained from the Engineering Societies Library, 29 W. 39th Street, New York, N. Y.

Alloy

RECRYSTALLIZATION. *"Some Observations on the Recrystallization of an Iron-Nickel Alloy,"* by George Sachs and J. Spretnak, *Metals Technology,* vol. 7, no. 1, January, 1940, pp. 1-7. It is concluded from the experiments in this paper that the process of recrystallization is consistent with the theory that the process is initiated by some specifically oriented fragments of the deformed metal. These fragments, for still an unknown reason, are more favored to form nuclei, to grow on recrystallization, and to survive on grain growth than the remainder of the deformed metal. (A1.)

Aluminum Alloys

MACHINING. *"Machining of Aluminum Alloys Cast or Wrought," Metal Progress,* vol. 37, no. 2, February, 1940, pp. 169-173. In this report the alloys are divided into groups according to whether they are cast or wrought, heat treated or not heat treated. The general machining characteristics of each group are described, and certain principles common to the machining of all aluminum alloys are considered. Aluminum alloys may be readily machined with equipment and tools generally available, provided a few principles are followed. However, as with all metals, tools and equipment of special design are sometimes desirable for maximum production. (A1.)

Analysis

CARBON. *"Magnetic Determination of Carbon,"* by H. K. Work and H. T. Clark, *Foundry Trade Journal,* vol. 62, no. 1222, January 18, 1940, pp. 65, 67. This is the description of a new instrument called the "carbanalyser" for the magnetic determination of cabon in a steel bath. It was made originally to facilitate the operation of the pilot-sized open-hearth furnace in the Jones & Laughlin Research and Development Laboratory. Its main objectives have been (1) accuracy and reproducibility of results, (2) ease and speed of operation and (3) simplicity and ruggedness of equipment. The constructional details are given in the article, how a specimen is prepared and the performance of the "carbanalyser" is also related. (A.)

Bronze

COPPER-ZIRCONIUM-CADMIUM. *"Copper-zirconium-Cadmium Bronze,"* by F. R. Hensel, E. I. Larsen and A. S. Doty, *Metals and Allovs,* vol. 10, no. 12, December, 1939, pp. 372-380. These data are the results of an extended investigation of alloys of copper, zirconium and cadmium. The authors present a new high strength, high conductivity alloy or bronze which is claimed to be superior in hardness and strength to the copper-cadmium alloys or bronzes—without severe loss in electrical conductivity. Its present applications include welding electrodes, heat-conducting members and electrical conducting members. (A1.)

Castings

CHROMIUM STEEL. *"Chromium Steel Castings,"* by E. K. Smith, *Metal Progress,* vol. 37, no. 1, January, 1940, pp. 49-54. Notes on more recent modifications of the high chromium steels in the form of castings, and some new data on castings containing less than 5 per cent chromium are listed here in this paper. The author classifies chromium steels as those containing (1) under 2 per cent chromium, (2) 2 to 3 per cent chromium, and (3) 4 to 6 per cent chromium properties. Chromium-nickel steels and special chromium steels are discussed for the purpose of making the author's report complete. (S.)

SAND CAST VS. DIE CAST. *"Die Cast or Sand Cast,"* by Herbert Chase, *Product Engineering,* vol. 11, no. 2, February, 1940, pp. 53-56. Both sand castings and die-castings are products of wide and unquestionable utility. They have many advantages and disadvantages, many of which are listed in this article, but each is valuable in its own certain class of production. To compare the two forms of casting, the author has set up a list of headings, such as: materials available, specific gravities, section thickness, coring, external shapes, surface smoothness and dimensional accuracy, to show the difference between the two systems. A table showing the physical properties of sand and die-castings is shown. Thre is also a table showing the comparison of factors affecting choice of casting process. (C.)

Cast Iron

COPPER. *"Copper in Cast Iron,"* by Tom Barlow, *The Iron Age,* vol. 145, no. 4, January 25, 1940, pp. 19-22. Until recently, the use of copper in gray cast iron has not received much publicity, although its use has grown extensively in this field. In iron, copper acts as a mild chill reducer and controller, a pearlite stabilizer, a strengthener and a hardener. Data to support these claims are given in this paper. C.I.)

COPPER. *"Copper in Cast Iron,"* by Tom Barlow, *The Iron Age,* vol. 145, no. 5, February 1, 1940, pp. 40-43, 77. Copper is becoming an important alloy addition to gray iron foundries today. In this article, detailed data on typical copper alloy irons and their physical properties and applications are presented. The article also contains information on special irons and general foundry practice. The author suggests the use of copper and chromium to obtain high strength, good toughness, low chill, extreme density and good machineability. (C.I.)

GLASS MOLDS. *"Metallurgical Study of Cast-Iron Glass Molds,"* by W. H. Bruckner, L. R. Kovac and A. B. Wilder, *The Bulletin American Ceramic Society,* vol. 19, No. 2, February, 1940, pp. 58-61. This is a progress report in which certain metallurgical factors which influence the service behavior of cast-iron glass molds were studied. Little of this sort of research work has been carried out in this field, and it was one of the purposes of this report to stimulate interest in this subject. The possibilities were investigated for the improvement of glass molds by a study of the metallurgical factors which control the service behavior of molds. Typical failures of mold irons were investigated and the results are described in this article. Heat-checking and growth tests were made on several types of iron for which the data are reported in the paper. (C.I.)

HIGH DUTY. *"Types of High-Duty Cast Irons,"* by A. J. Nicol Smith, *Foundry Trade Journal,* vol. 62, no. 1221, January 11, 1940, pp. 51-52, 53. In this article, the author deals with two classes of high duty irons, those which have high strength properties and those which are high duty irons in respect to some other special property. In considering the types of high strength irons, these can be classified into many categories according to the method of manufacture and after-treatment. In this way, the author has classified his irons as those with strengths from (1) 9 to 20, (2) 20 to 22, and (3) 22 to 25 tons per sq. in. Special irons include martensitic irons, high-silicon irons, high-chromium irons and high-aluminum irons. (C.I.)

Copper

SYSTEM. *"The Copper-rich Alloys of the Copper-Nickel-Phosphorus System,"* by D. K. Crampton, H. L. Burghoff and J. T. Stacy, *Metals Technology,* vol. 7, no. 1, January, 1940, pp. 1-17. The study of copper alloys of the age-hardening type has received considerable attention. Copper containing small amounts of nickel and phosphorus have very important characteristics; among which are the great capacity for being hardened and relatively high electrical and thermal conductivity in the hardened state. Cold-working also brings out the same effects. This paper also makes a study of the solubility relationships in the copper-rich portion of the copper - nickel - phosphorus system. This paper presents some of the results obtained in this investigation to date and also gives properties of typical alloys that appear to be of commercial interest. (A1.)

Cupola

BALANCED BLAST. *"The Balanced-Blast Cupola and Fluidity,"* by Wm. Y. Buchanan, *Foundry Trade Journal,* vol. 62, No. 1225, February 8, 1940, pp. 113-114. The furnace described in this article of the balanced-blast cupola is referred to as Lang No. 2, giving full measurements of the furnace, composition of the charge, tapping temperature, lining used in the cupola and a data sheet showing a typical day's cast. The author has not been able to make fluidity tests to report since such action would have made it necessary for him to make direct comparisons between the cupola before and after conversion to the balanced-blast system. However, information from other sources reveal that the balanced-blast cupola gave cast iron of low gas content, and shown that degasification by scale treatment produced fluidity, and so it should prove that balanced-blast cupola produces better fluidity on that account alone. (F.)

LININGS. *"Monolithic Linings for Cupolas," Foundry Trade Journal,* vol. 62, no. 1222, January 18, 1940, pp. 63-64. This is a discussion involving the use of firebrick or monolithic linings in furnaces. Many factors must be considered before a decision on the type of lining to be used is reached. Some of the chief factors to be considered are quality of materials, treatment of materials and amount of iron melted during each heat. A discussion of the paper follows.

Safety

LIGHTING. *"Industrial Illumination,"* by Dean M. Warren and A. R. Finley, *Steel,* vol. 106, no. 4, January 22, 1940, pp. 36-40, 52-53. Plants that would like to modernize, would find that modern lighting systems and methods bring lower production costs, better quality of work, reduced injury and accident rates, improved working conditions, and better employe morale. (Sa.)

Steel Foundry

CHARACTERISTICS. *"Characteristics of 5.0 and 7.0 Per Cent Chromium Steels With VaryingMolybdenum and Vanadium Content,"* by W. G. Hildorf, C. L. Clark and A. E. White, *Transactions A.S.M.,* vol. 27, no. 4, December, 1939, pp. 1090-1114. Results obtained from short-time tensile tests at room temperature and 1200° F., from rupture tests at 1200° F., are set forth. Micro-examination of 5.0 and 7.0 per cent chromium steels with varying amounts of molybdenum and vanadium also were made. Twenty-one steels were considered. Results show that general strength characteristics are increased as the molybdenum content is varied over the given range, while strength is decreased when the vanadium exceeds a given amount. An explanation for this behavior is advanced on the basis of microstructures. (S.)

EQUIPMENT. *"Steel Foundry,"* by H. W. Maack, *Steel,* vol. 106, no. 2, January 8, 1940, pp. 38, 40-41. Swinging roofs on melting furnaces cut charging from 40 to 3 minutes and also help to eliminate laborious handling tasks. The new molding machines with roller-conveyor system, speed and increase "straightline" production, due to greater efficiency. (M.H.)

GAS. *"Gas Content vs. Steel Behavior,"* by George T. Motok, *Iron Age,* vol. 144, no. 23, December 7, 1939, pp. 40-43. This is a study of Republic's vacuum extraction process that permits the steelmaker to study oxidation products remaining in steel as well as determine the amounts of nitrogen, oxygen, etc. An explanation can be made of variations in characteristics of steel in the same heat which can not be accounted for by routine chemical, physical and metallurgical tests. The author in this article gives case histories showing correlation between gas analyses and variations in performance of welding steels, spring steels and stainless steels. (S.)

GATING AND FEEDING. *"Gating and Feeding of Castinas,"* by Anton Johnson, *Iron Age,* vol. 145, No. 8, February 22, 1940, pp. 26-28. There are various kinds and ways of gating, and they all have their advantages. These types are used single or multiple, according to size, shape and metal section of the castings involved. It is the aim to select a particular gate that will distribute metal uniformity to equalize shrinkage as much as possible and to avoid misruns. This article gives valuable information on gating, the importance of proper making of gates and the value of knowing where to place them. Author recommends the use of tile or core gates for light and medium sized work. Feed heads and their position in relation to size of casting is also discussed. (C.)

ISOTHERMAL TRANSFORMATION. *"Isothermal Transformation in Steels,"* by Edmund S. Davenport, *Transactions A.S.M.,* vol. 27, no. 4, December, 1939, pp. 837-886. The development and fundamental significance of isothermal transformation investigations as applied to the heat treatment of steel is briefly reviewed. "S" curves are used to reveal the major effects of alloying elements. The effect of individual elements, such as manganese, nickel, vanadium and others, are first discussed and followed by the presentation of the isothermal transformation diagrams of several typical alloy steels of the S.A.E. series, 0.40 per cent carbon grade. (S.)

LEADED. *"A Discussion of Leaded Steels."* by F. J. Robbins and G. R. Caskey, *Transactions A.S.M.,* vol. 27, no. 4, December, 1939, pp. 887-922. The paper reports the results of physical and machine tests conducted on several analyses of lead-bearing steels in an effort to estimate the value of this type of steel for industrial applications. Evaluating the physical character of this class of steel, a comparison test of typical tests to the average properties of non-leaded steels of similar base chemistry as found in standard references, is made. Machining tests are summarized and placed on a chart in which the performance of each grade of lead-bearing steel is compared directly with the similar standard grade containing no lead. Some of the faults of lead-bearing steels, as seen from time to time in production heats, indicate that these are being overcome by new manufacturing strides. (S.)

April Chapter Meeting Schedule

April 5

Buffalo
Hotel Touraine, Buffalo
FRED SCHRADER, A. P. Green Fire Brick Co.
"Ceramics"

✦ ✦

April 8

Central Indiana
Washington Hotel, Indianapolis
RUSSELL J. GREENLEE, Purdue University

✦

Chicago
Chicago Towers Bldg. (Formerly Medinah Club)
DR. CHARLES REITELL, Stevenson, Jordan & Harrison
"Management Problems"

✦ ✦

April 9

Michiana
Hotel Oliver, South Bend, Ind.
"Round Table Discussion" (a) Steel and Malleable Iron, (b) Gray Iron, (c) Non-Ferrous

✦ ✦

April 11

Northeastern Ohio
Cleveland Club, Cleveland
E. C. BARRINGER, Institute of Scrap Iron and Steel
"Scrap-Cinderella of Raw Materials"

St. Louis District
York Hotel, St. Louis
DONALD J. REESE, International Nickel Co.
"Cupola Practice"

✦ ✦

April 12

Northern California
Alexander Hamilton Hotel
JOHN H. SPILLANE, Metallurgical Sales Corp.
"Melting Practices and Physical Properties of Steel"

✦ ✦

April 12-13

8th Annual
Michigan State Foundry Conference
Detroit Chapter and Michigan State College
East Lansing, Mich.

✦ ✦

April 15

Quad City
LeClaire Hotel, Moline, Ill.
C. E. WESTOVER, Burnside Steel Foundry Co.
"Job Evaluation and Time Study"

✦ ✦

April 16

Northern Illinois-Southern Wisconsin
Freeport, Ill.
C. E. BALES, Ironton Fire Brick Co.
"Cupola and Ladle Refractories"

April 19

Birmingham District
Hotel Tutwiler, Birmingham
MAX KUNIANSKY, Lynchburg Foundry Co.
"Foundry Practice"

✦

Central New York
WILLARD STRAIGHT, Cornell University, Ithaca, N. Y.
HARRY W. DIETERT, Harry W. Dietert Co.
"The Effect of Sand Condition on the Physical Properties of Iron"

✦

Wisconsin
Schroeder Hotel, Milwaukee
W. J. CAMERON, Ford Motor Co.

✦ ✦

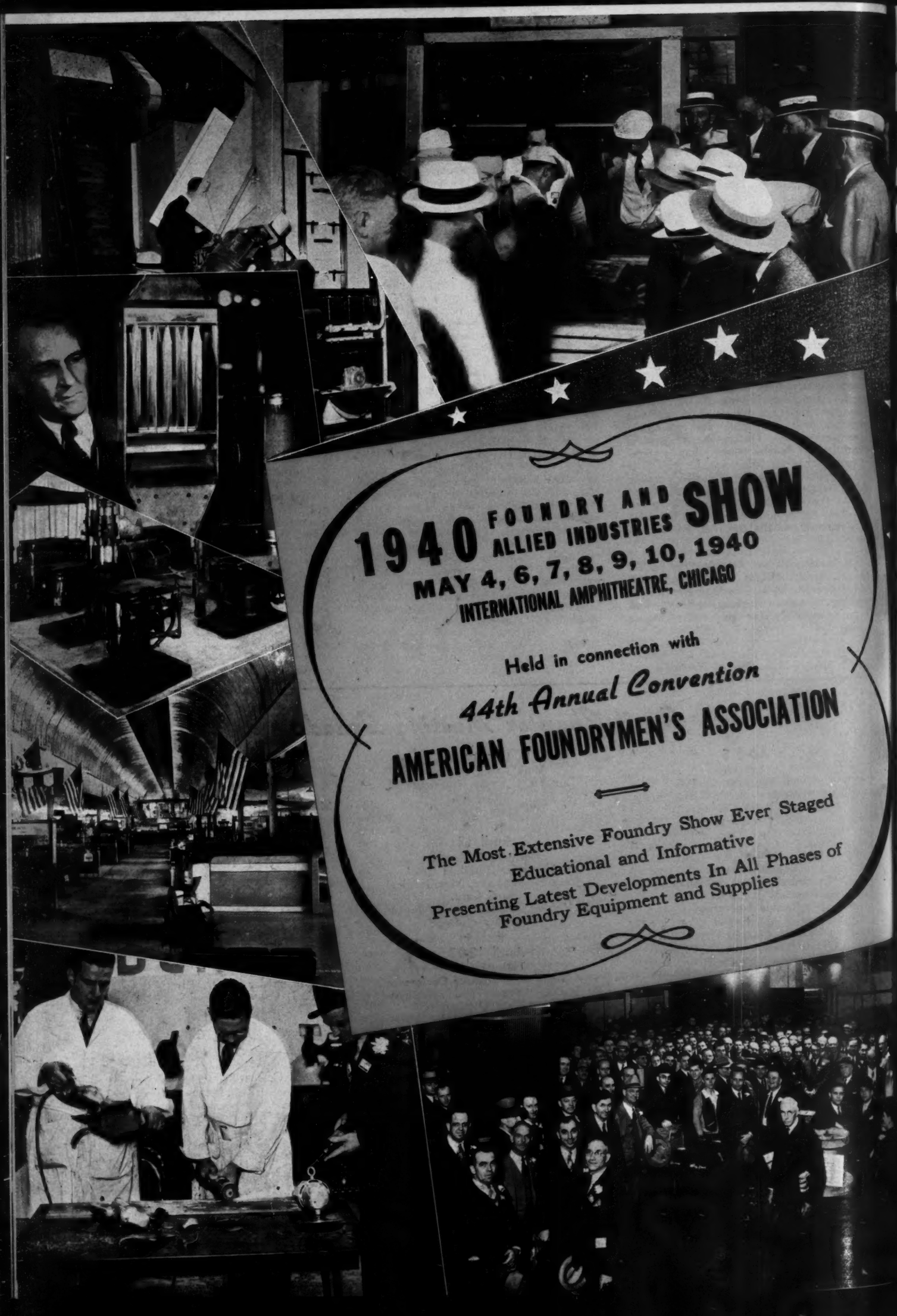
April 26

Ontario
Rock Garden Lodge, Hamilton
DR. W. G. CHUBB, Ontario Research Foundation
"The Manufacture and Casting of Magnesium Alloys"

✦ ✦

April 29

Metropolitan New York-New Jersey
Essex House, Newark, N. J.
FRANK J. DOST, Superior Foundry Co.
"Machine Tool Castings"


1940 FOUNDRY AND ALLIED INDUSTRIES SHOW
MAY 4, 6, 7, 8, 9, 10, 1940
INTERNATIONAL AMPHITHEATRE, CHICAGO
Held in connection with
44th Annual Convention
AMERICAN FOUNDRYMEN'S ASSOCIATION
The Most Extensive Foundry Show Ever Staged
Educational and Informative
Presenting Latest Developments In All Phases of
Foundry Equipment and Supplies